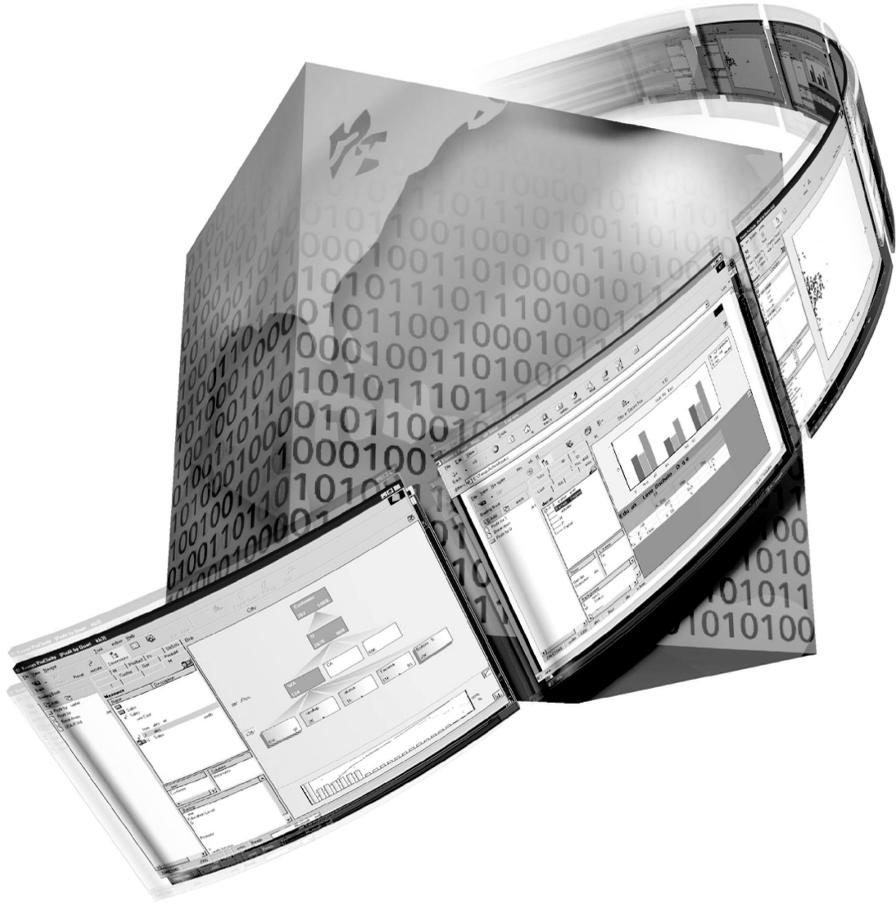


ProClarity™ Analytic Platform 4.0

Desktop Client



Getting Started Guide



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Version 4.0

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ProClarity Desktop Client Documentation

For information about ProClarity Enterprise Server, see Chapter 7.

Whether you are a first-time ProClarity Desktop Client user or a seasoned operator wanting to increase your skills, you can find the help you need from the ProClarity Desktop Client documentation set. The following documents provide complete information about working with ProClarity Desktop Client as a stand-alone application and as part of ProClarity Enterprise Server (ProClarity Server):

- The Getting Started Guide—to help new users or to refresh basic skills.
- ProClarity Desktop Client Online Help—to provide immediate help with using any Desktop Client function.
- MDX Help—to help users understand how to use the MDX Editor to build customized MDX queries.
- ProClarity Server Authoring Tool Online Help—to help briefing book authors publish books to libraries on the ProClarity Server where those books can be accessed through a Web browser by other authorized users.
- The Developer's Guide—to help developers customize their applications with the ProClarity Desktop Client Object Model.
- The Administrator's Guide—to provide information about deploying Active Books™.

Getting Started Guide

The Getting Started Guide is intended for new ProClarity Desktop Client users or those who use the application infrequently and need a refresher in the basics. It includes information about the following:

- Installing and starting ProClarity Desktop Client
- The basics of multidimensional analysis
- Using basic data query techniques to answer specific questions
- Exploring your data
- Saving and communicating views
- Online Publishing
- Using advanced functions

About feature availability

The Getting Started Guide provides information about the features that are available while using ProClarity Desktop Client with ProClarity Server. If you are using a different version of ProClarity software, some of the features described in the guide may not be available. The other versions are as follows:

Briefing books and publishing properties are explained in Chapter 6. ProClarity Server and Active Books are explained in Chapter 7.

- ProClarity Desktop Client only (without ProClarity Server). All of the features described in this Guide except for those provided by the ProClarity Server Authoring Tool are available.
- ProClarity Rich Client. The Rich Client has the look and feel of ProClarity Desktop Client but runs in a Web browser. You can publish to ProClarity Server from the Rich Client. However, because briefing book publishing properties are honored, some features may not be available in some briefing books that are used within the Rich Client.
- ProClarity Active Books. Because briefing book publishing properties are honored, some features may not be available in some Active Books. Also, an Active Book may be read-only and provide no analysis features.

ProClarity Desktop Client Online Help

You can access immediate help for any task you want to accomplish by using the Online Help. Online Help provides step-by-step instructions for each of ProClarity Desktop Client's data analysis tools. It also provides an overview of multidimensional analysis and explains how to access other help and product support information. In addition, most of the Desktop Client dialog boxes have a Help button, and most fields have tips.

To access Online Help: From the **menu** bar, click **Help** and select **Contents**.

MDX Help

The online MDX Help provides information to those who want to customize queries using the MDX language. To access MDX Help, from ProClarity's **View** menu, select **MDX Editor**. Then, click the **Help** button.

For information about ProClarity Server, see Chapter 7.

ProClarity Server Authoring Tool Online Help

The ProClarity Server Authoring Tool Online Help provides information about how to retrieve briefing books from and publish books to the ProClarity Server. This help also describes how to organize libraries on the ProClarity Server and how to manage security for the briefing books you publish. To access the Authoring Tool help, from the Desktop Client toolbar, click the **ProClarity Server** button. Then, click **Help**.

Developer's Guide

The online Developer's Guide provides information about the use of ProClarity Desktop Client Object Models for various development scenarios. To access the Developer's Guide, from the menu bar, click **Help** and select **ProClarity Desktop Client Developer's Guide**.

Administrator's Guide

This online document provides information about deploying ProClarity Desktop Client Active Books. The Client Installation screen provides an option to view this guide, or you can browse the ProClarity Desktop Client application CD to find AdminInstall.txt.

ProClarity Enterprise Server Documentation

In addition to the ProClarity Desktop Client documentation, the ProClarity product family contains documentation for users of other components of the ProClarity Enterprise Server. The following table identifies those users and the available documentation:

User	Documentation	Description
Web Client Users	Web Client Online Help	Provides instructions for accessing briefing books and analyzing the data in those briefing books through a Web browser.
	Web Client Quick Start Guide	A four-page card provides "quick start" information about menu and toolbar contents and instructions for applying basic analysis features.
Administrators	Server Administrator's Guide	Provides instructions for installing, configuring, and deploying ProClarity Enterprise Server.
	Administration Tool Online Help	Provides instructions for using the Administration Tool (MMC snap-in) to administer servers, assign users, and manage security roles.
Developers	ProClarity Enterprise Server Developer's Guide	Provides information for developing three-tier business analysis solutions using the ProClarity Analytic Platform™ Enterprise Edition Developer's Kit.

ProClarity Product Support

All users can obtain technical support by viewing the FAQs on the ProClarity Corporation Web site.

Users with a ProClarity support and maintenance subscription will have access to the following additional benefits:

- 24 hour online support
- Help desk support for up to 2 designated customer contacts
 - M-F, 7am - 6 pm MST from our US headquarters, excluding major US holidays
 - M-F 8am - 5pm in our European headquarters
- Licensed product upgrades and maintenance releases shipped automatically

If you have questions about your existing support subscription or would like to purchase a new one, contact your ProClarity Corporation sales representative at (208) 344-1630 or sales@proclarity.com.

To obtain the FAQs and other support, open the ProClarity Corporation Web site at www.proclarity.com.

What's New in Version 4.0

The primary addition to Version 4.0 of the ProClarity Desktop Client is the briefing book Authoring Tool, which is available if you are working within the ProClarity Server environment. Features associated with the Authoring Tool are as follows:

For information about ProClarity Server, see Chapter 7.

- Publish a briefing book to ProClarity Server. Deploying briefing books within the ProClarity Server environment is simplified because briefing books are saved to a common server, and readers need only a Web browser to access the briefing books.
- Manage ProClarity Server briefing books. The Authoring Tool allows you to manage security for the briefing books you publish.
- Retrieve ProClarity Server briefing books. You can open books from ProClarity Server and analyze them using Desktop Client features. You can also edit them and save them to your computer or (if access privileges allow) republish them to ProClarity Server.

The following are additional features or changes for the ProClarity Desktop Client 4.0:

- Use Cube Cell Formatting Properties. This is available from the Grid Configurations Options box. If selected, queries will return cell properties

(such as background color and font style) that have been set in the database. See page 57.

- Use Non-Empty Crossjoin. This is available from the Options box. (From the **File** menu, select **Options**). When selected, the MDX Non-Empty Crossjoin function is used during query execution.
- "Children" member in the dimension tree (drill-down feature). See page 36.
- Rotate Axis Labels. You can change vertical labels to horizontal ones and vice-versa. See page 61.
- Show All Column Header Text. This can be selected in the **Column Header** tab of the **Grid Configurations Options** box (see “Changing grid properties” on page 57). If selected, column widths are based on the length of the column header. If not selected, column widths are based on the longest number in a column.
- Number of items found. The Find feature (see “Finding dimension members” on page 27) now displays the number of items found.
- Insert a level into a Decomposition Tree. See “Working with the Decomposition Tree” on page 66.

To learn more about recently added features, see the ProClarity Desktop Client Online Help.

Chapter 1: Understanding ProClarity Desktop Client and Multidimensional Analysis

This chapter explains how ProClarity™ Desktop Client provides the tools you need to create useful, visual information from your business data. The chapter also provides a foundation for effectively using these tools by explaining the concepts of Online Analytical Processing (OLAP) and Multidimensional Analysis.

The data problem

Many decision-makers “drown in data while thirsting for information.” You probably have no lack of data—income statements, balance sheets, sales figures, production figures, quarterly reports, annual reports—the list is long. While these standard reports give you a great deal of data, they do not always provide the *information* you need about your business.

Turning data into information

Data + Relevance + Context = **Information**

By itself, data does not provide information. To create information from data, you must first sort through the available data to extract the specific data points (individual facts) that are relevant to answering the questions you have in mind.

Next, you must arrange the relevant data into the desired context of relationships. The magnitude of a data point by itself is of little importance. What is important, however, is whether the magnitude of that data point is what it *should be* relative to the same period last year, to its peers, and to the overall trend. For example, if the company had \$1 million in sales this year, you would compare this figure to last year’s sales and to the overall growth trend of the company. These kinds of *relationships* among the data reveal cause and effect patterns, trends, and exceptions that indicate how your business is doing and where it is going—*information* you can use to make decisions.

Only after the relevant data is arranged within a context of relationships can you derive information from the data and make decisions based on the information.

Getting stuck in the report cycle

Sorting through paper reports to extract the relevant data and put it into the desired context can be overwhelmingly cumbersome. Sending report requests to your data department to arrange the specific data the way you want it can produce delays that make the reports obsolete. Then, viewing a custom report generates more questions in your mind, and these questions generate more report requests that produce further delays.

There must be a better way.

The ProClarity Desktop Client solution

There is a better way.

ProClarity Desktop Client is a multidimensional analysis software package that allows you to interact directly with the data on your server. Using familiar click-and-drag techniques and drop-down menus, you can query your database to extract the data you deem relevant and arrange it in the context you deem useful to create information in a matter of minutes. And the information can be presented as graphs or charts, so you can easily see the data relationships.

With ProClarity Desktop Client, if the result of one query generates another question in your mind, you can instantly find the answer. By rearranging the data, choosing a different set of data, and exploring various levels of detail in the data, you can view successive relationships as you follow a train of thought.

What are OLAP and multidimensional analysis?

Online Analytical Processing or OLAP is a way of analyzing data by interacting directly with data rather than by reviewing static paper reports. OLAP technology arranges raw data so that someone working at a computer can view the data in graphic formats that reflect a wide variety of relationships among the data. OLAP makes multidimensional analysis possible.

Multidimensional analysis is a process of analyzing data that is organized according to the variables (such as region, product, time, etc.) that decision-makers find most useful in looking at their businesses.

For example, let's assume you have data regarding sales dollars. You also have data regarding which products and regions generated the sales dollars over various periods of time. The quantitative *measure* (sales dollars) contains *dimensions*—product, region, and time.

When you view sales, you want to see how sales were related to the products that generated them. Perhaps you want to limit your product comparisons to only the top ten sellers. Then, you want to see how the sales per product fluctuated over time. Also, you want to see how the sales per product during a certain time period compared among regions. In other words, you want to see how the various dimensions of the data relate to one another.

Information derived from relationships among data dimensions fosters decision-making. This is what multidimensional analysis is all about.

Terms used in multidimensional analysis

Data is stored on the server's database in a multidimensional arrangement referred to as a cube. Cubes contain *measures* and *dimensions* of measures. Measures are quantitative values. Some examples of measures are Sales Dollars, Number of Product Failures, Gross Margin, and Average Inventory Levels. While all cubes have at least one measure, they can have multiple measures.

Measures are analyzed by dimensions (attributes or categories). For example, you can analyze the measure Sales Dollars by Geographic Region or Product Family.

Dimensions are organized into a hierarchical tree. Components of the dimension are referred to as *members* or *items*.

The sample cube that follows for a hypothetical computer manufacturer illustrates dimensions and their members organized in a hierarchical tree.

SALES CUBE

-All Products	-All World	-All Time
-PCs	-Europe	-1997
+Business PCs	+France	-Quarter 1
+ Home PCs	+ Germany	+January
+ Laptops	+ Italy	+February
+Servers	+Netherlands	+March
-Peripherals	+ Spain	-Quarter 2
+Misc.	+UK	+April
+Network	-North America	+May
+ Printers	+ Canada	+June
	+ Mexico	-Quarter 3
	-USA	+July
	+ California	+August
	+ Florida	+September
	+ Illinois	-Quarter 4
	+Louisiana	+October
	+Michigan	+November
		+December

Example of dimensions and their members in a hierarchical tree

- The cube contains one measure: Sales.
- The cube contains three dimensions: Products, Geographic Region, and Time.
- Among the items that are members of dimensions are All Products, Europe, and July.

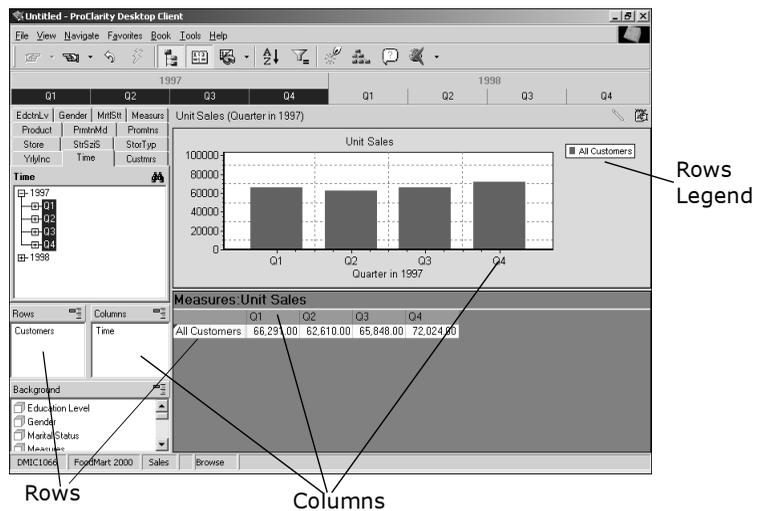
When you use ProClarity Desktop Client, you access a cube and choose relevant data by selecting measures and dimension members. You can arrange the measures and dimension members in various layouts. The arrangements create visual graphs and charts that illustrate relationships. You can view relationships among members that are lower or higher in the hierarchy by drilling down or drilling up. You can also filter and sort the data. ProClarity Desktop Client offers these and many other tools so you can choose relevant data and view it in pertinent relationships. ProClarity Desktop Client lets you create the information you need to make decisions about your business.

Understanding Rows, Columns, and Background

When you create a chart or graph in ProClarity Desktop Client, you select measures and dimension members to define the set of relevant data. A screen displaying a chart or graph is called a “view.” You also arrange the measures and dimension members into Rows, Columns, or Background to visualize comparisons. The following example view illustrates a set of relevant data and its arrangement.

A screen displaying a chart or graph is called a “view.”

The view is displaying the Dimensions tool, which is used to select and arrange the data. The Dimensions tool is explained in Chapter 3.



Relevant data and its arrangement

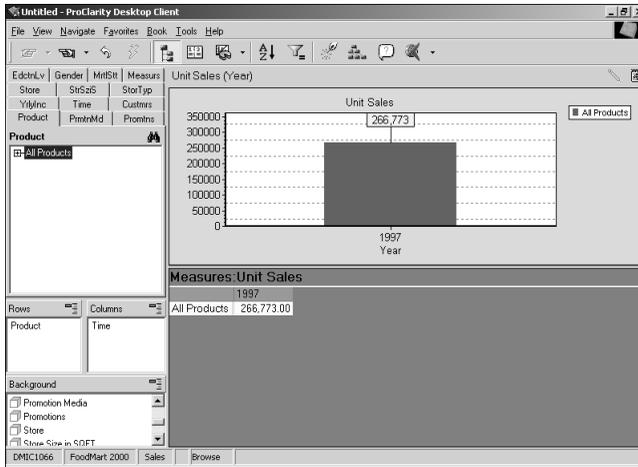
Notice how the dimensions and their members specified as being Rows and Columns relate to the row and column labels of the chart and the grid. Notice also how the chart values correspond to the cell values of the grid.

How the relevant data and its arrangement affect your charts and graphs

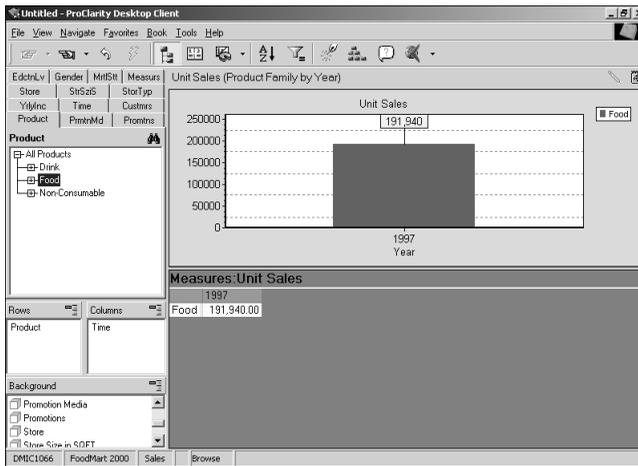
Both the data that is selected and the way it is arranged affect the display.

The relevant data

In the two views that follow, the row, column, and background dimension arrangements are the same, but the members included for each dimension are not. View #1 includes all members of the Products dimension; View #2 includes only the Food member of the Products dimension.



View #1: Includes the "All" member of the Products dimension



View #2: Includes only the "Food" member of the Products dimension

Because the relevant data for the two views is different, the values are also different, even though the dimension arrangement is the same.

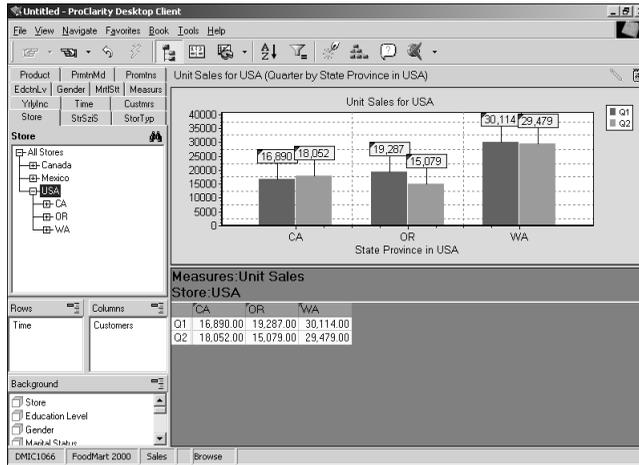
The data arrangement

In the two views that follow, the relevant data is the same, but the arrangements are different. Both views include the same members of all

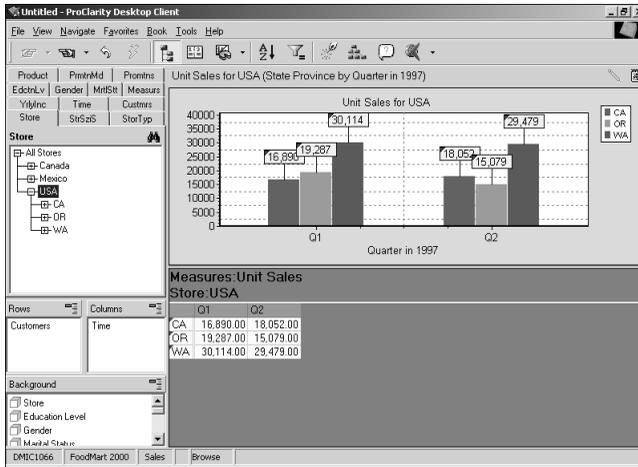
dimensions, but the dimensions are arranged differently among the Rows, Columns, and Background.

Because the relevant data for the two views is the same, the values are the same, even though the dimension arrangements are different.

Different arrangements emphasize different comparisons. View #1 emphasizes a state-to-state customer comparison; View #2 emphasizes a quarter-to-quarter comparison.



View #1: Displays the Time dimension in Rows, the Customer dimension in Columns

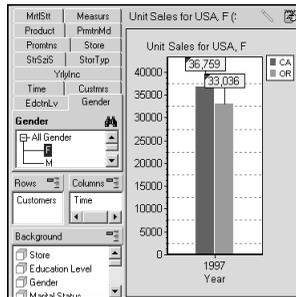


View #2: Displays the Customer dimension in Rows, the Time dimension in Columns

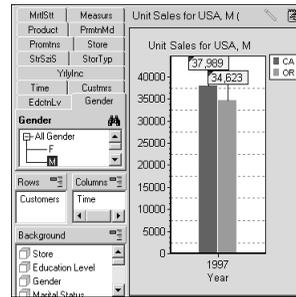
The Background

Items in the Background are not being visually compared in the displayed graph. However, they are affecting the relevant data. Changing Background member selections, which changes the relevant data, allows you to view different data "slices." In other words, the Rows and Columns comparisons are based on different data subsets as defined by the selected Background members.

In the following examples, note how a change made to an item selected in the Background (the F or M members of the Gender dimension) affects the chart values.



F member selected in the Background Gender dimension



M member selected in the Background Gender dimension

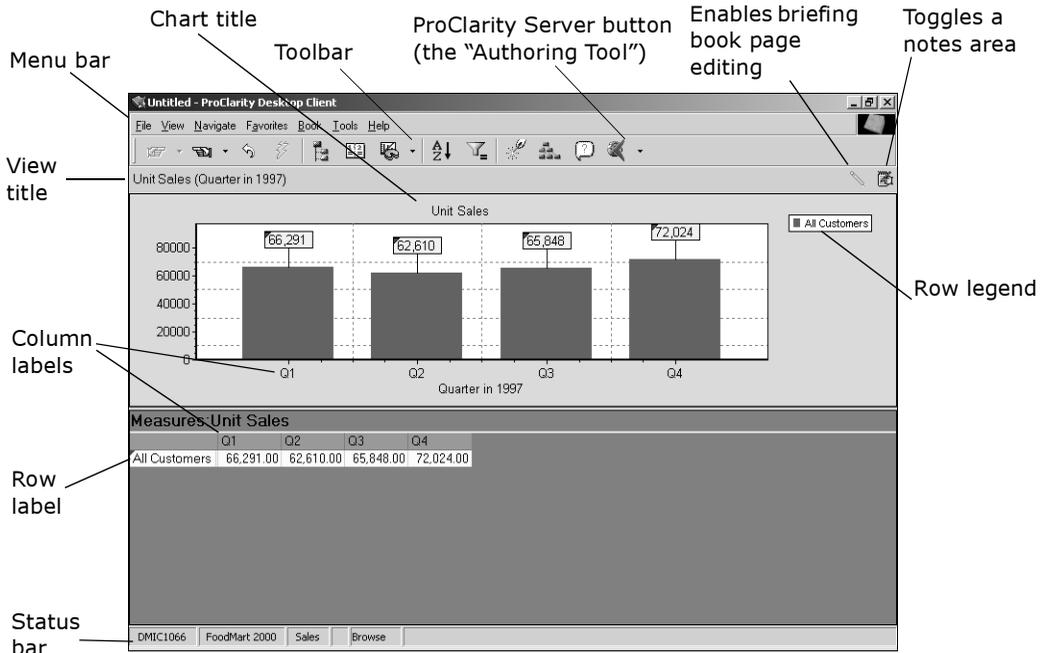
Some restrictions apply to Background items as follows:

- If you drill down or drill up on a Background dimension, the dimension will automatically move to the Rows.
- For any dimension in the Background, only one member may be *used* at a time.

The application allows you to select more than one member at a time on a Background dimension. You must then decide how to use them one at a time. Making multiple selections on a Background item is explained in the Dimensions tool section of Chapter 3.

ProClarity Desktop Client screen details

The following explains ProClarity Desktop Client screen areas.



Details of the ProClarity Screen

Chapter 2: Installing and Starting ProClarity Desktop Client

This chapter includes the system requirements and instructions for installing, starting, and exiting ProClarity Desktop Client. It also includes instructions for moving among data views.

System requirements

Hardware

Pentium class processor

80MB RAM minimum

(128MB RAM recommended)

Software

Windows® 95b or newer

OR

Windows NT 4.0 with Service Pack 5 or greater

OR

Windows 98

OR

Windows 2000

OR

Windows Me

Microsoft® Internet Explorer 5.0 or greater

Installing ProClarity Desktop Client

The ProClarity Desktop Client installation program leads you through a series of screens. Follow the instructions on the screens to specify which components to install and to specify the folder in which the components will reside. The default program folder is C:\Program Files\ProClarity\ProClarity Desktop Client.

Before installing ProClarity Desktop Client 4.0, please do the following:

- Exit all other software programs.
- If an earlier version of ProClarity Desktop Client is currently installed, uninstall it before installing ProClarity Desktop Client 4.0.
- If your computer does not have Microsoft Windows Installer already loaded, the ProClarity Desktop Client Installation program will install it automatically. This will require you to restart the system before proceeding with the rest of the ProClarity Desktop Client installation process.

1. Insert the ProClarity Analytic Platform CD-ROM into the computer CD-ROM drive. After a few seconds, the first **ProClarity™ Analytic Platform 4.0 Desktop Edition Installation** screen appears.

Note

If the computer does not automatically start the installation program after the CD has been loaded, do the following:

- From the Windows **Start** menu, select **Run**.
- Click **Browse** to locate Install.exe on the CD.
- Double-click **Install.exe**. The Install.exe path will appear in the **Run** box.
- Click **OK**. The **ProClarity Desktop Edition Installation** screen appears.
- Click **Install ProClarity Desktop Client** to begin choosing installation options.

-
2. Click **Install ProClarity**.

Note

If ProClarity Desktop Client 4.0 is currently installed, the **Program Maintenance** screen will appear, giving you the option to Modify, Repair, or Remove the program files. Select an option and click **Next**.

-
3. At the Welcome screen, click **Next**. The **License Agreement** screen appears.
 4. Read the **License Agreement** and select the option for accepting the terms of the license, then click **Next**. If you do not accept the terms, the installation program will discontinue the process. When you accept the terms and click **Next**, the **Customer Information** screen appears.
 5. Complete the screen information and click **Next**. The **Custom Setup** screen appears.

6. To accept the default installation options, click **Next** on the **Custom Setup** screen or use the **Custom Setup** screen to decide the components you wish to install, where you want the files located, the amount of disk space you have available, and whether to include Other Files with the installation. When using this screen, note the following:
 - The **Feature Description** window briefly identifies the purpose of the highlighted component and the amount of disk space required to install the corresponding files.
 - The **Microsoft Office Integration** component provides files that allow ProClarity Desktop Client to work interactively with Microsoft Office 2000 products if Office 2000 is currently installed.
 - The **ProClarity Samples** component provides various files to help the user work with and learn the more advanced features of ProClarity™ Desktop Client.
 - The **Connection to ProClarity Enterprise Server** allows users to publish, manage, and retrieve ProClarity Server briefing books.
 - The **Change** button allows you to choose where to install the program files.
 - The **Space** button displays the amount of disk space that is available on the system's hard drives.
 - To select or deselect components other than the default selections, click on the box next to the component and choose an option from the drop-down menu.
7. After choosing the setup options, click **Next**.
8. The **Ready to Install the Program** screen lets you review or change any of your installation settings. Click **Install** to continue with the installation.
9. When the **InstallShield Wizard Completed** screen appears, you can click the **View Readme** button to display a Readme file. The Readme file contains information about the new ProClarity Analytic Platform features, a list of CD contents, product support contact information, system requirements, and known technical issues with the program.
10. Click **Finish** to complete the installation.

The initial installation screen reappears. When viewing the screen, note the following:

- The **Online Registration** button takes you to ProClarity's online registration form.
- The **View ReadMe.txt** button displays the readme file.
- The **View Administrator's Guide** displays the Active Book Administrator's Guide.
- The **Browse CD contents** button opens a Windows Explorer screen containing the folders and files on the CD.
- The **www.proclarity.com** button takes you to the ProClarity Corporation Web site.
- The **Contact Us** button provides ProClarity Corporation contact information.

Starting ProClarity Desktop Client

1. On the Windows Desktop, double-click on the **ProClarity Desktop Client 4.0** icon.

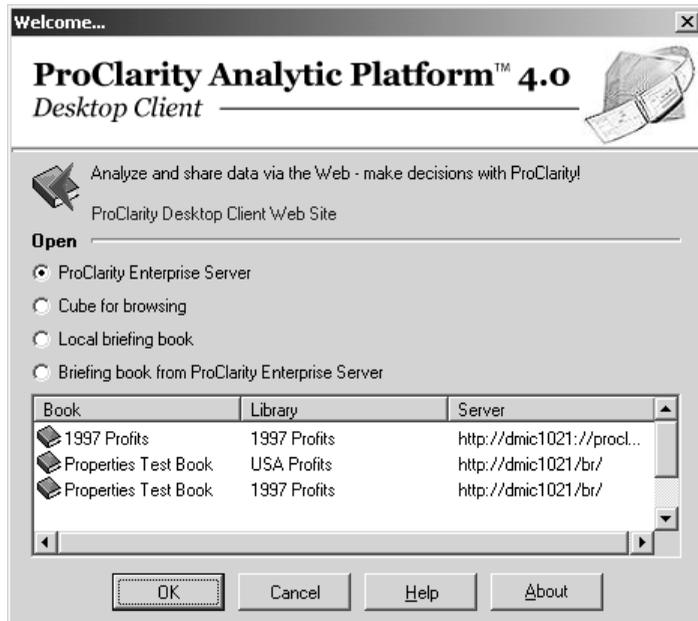
OR

From the Windows **Start** menu, point to **Programs**, then select:
ProClarity>ProClarity Desktop Client>ProClarity Desktop Client 4.0.

Depending on how your system is configured, the following may happen when you start ProClarity Desktop Client:

- A briefing book opens.
- A home page is displayed.
- The **Welcome** screen with log on choices appears.

The following figure illustrates the **Welcome** screen:



2. Select an option, then click **OK**.

Further steps depend on what you select.

- **ProClarity Desktop Client Web Site:** After viewing the Web site, close the Web screen to return to the **Welcome** screen and select another option.
- **ProClarity Enterprise Server:** The **ProClarity Enterprise Server** box appears with options for accessing the ProClarity Server and retrieving a briefing book. Perform the steps in the **ProClarity Enterprise Server Option** section below.
- **Cube for browsing:** The **Connect** box appears with options for connecting to an OLAP Server or a local cube. Perform the steps in the **Cube for browsing option** section below.
- **Local briefing book:** An **Open ProClarity Briefing Book** box appears. Locate and open the briefing book. The briefing book opens and you are ready to begin.

ProClarity Enterprise Server (ProClarity Server) is explained in Chapter 7.

A local briefing book is a briefing book that is saved on your computer.

- **Briefing book from ProClarity Enterprise Server:** Select a previously opened briefing book from the bottom pane and click **OK**. The briefing book opens and you are ready to begin.

ProClarity Enterprise Server option

ProClarity Enterprise Server is explained in Chapter 7.



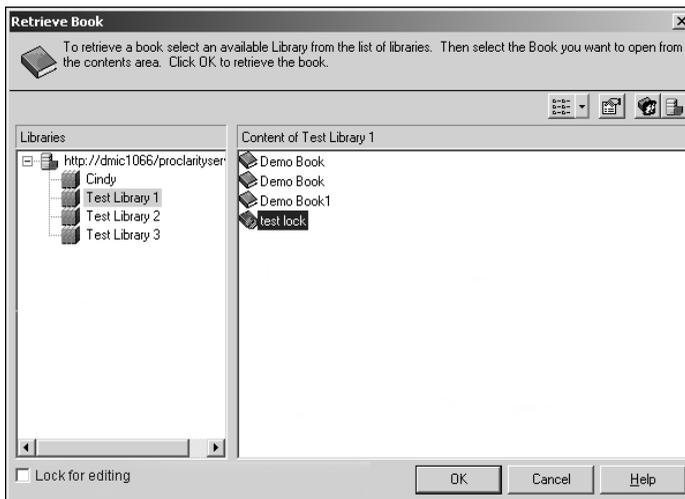
The ProClarity Server box. This appears if you select ProClarity Enterprise Server.

1. Enter the name of the server URL.

OR

If the server requires a username and password, enter the name of the server URL, click **Security**, and enter your username and password.

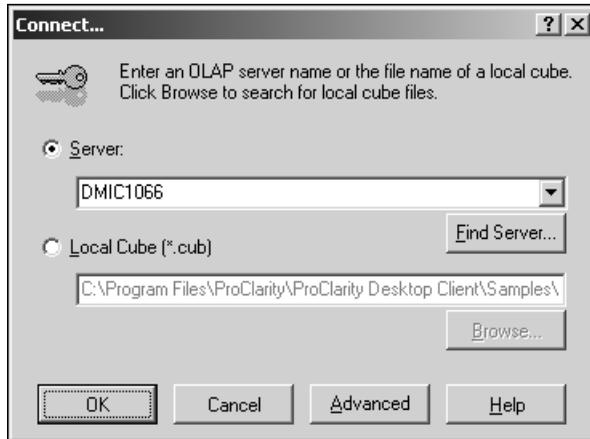
2. Click **OK** to log on. The **Retrieve Book** screen appears.



The Retrieve Book screen

3. Select a library from the libraries list in the left pane and a book from the library contents list in the right pane.
4. Click **OK**. The selected briefing book is displayed.

Cube for browsing option



The Connect box. This appears if you select Cube for browsing

1. Select an option and fill in the fields as follows:

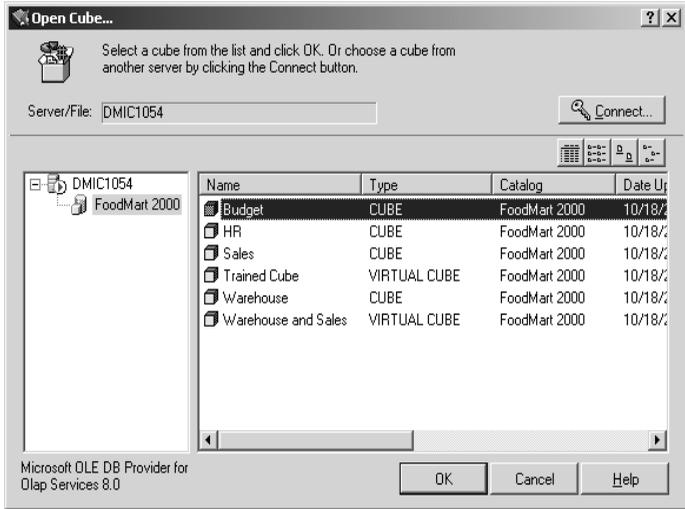
- **Server:** Enter the server name that contains the data you will analyze, or click  to select the server from a list of recently used servers.

To browse for a server, click the **Find Server** button. *Windows NT 4.0 or Windows 2000 users:* A Network Browse screen shows a list of network servers and indicates which ones are OLAP servers. *Other users:* The server may be listed in your Network Neighborhood.

- **Local Cube:** Enter the name of a cube located on a local disk. To browse for a local cube, click the **Browse** button.

This option is available if you have the Microsoft OLE DB Provider for OLAP Services. After a local cube has been created, you can open it without being connected to the OLAP server and perform most ProClarity Desktop Client functions with it. For more information about local cubes, refer to Online Help.

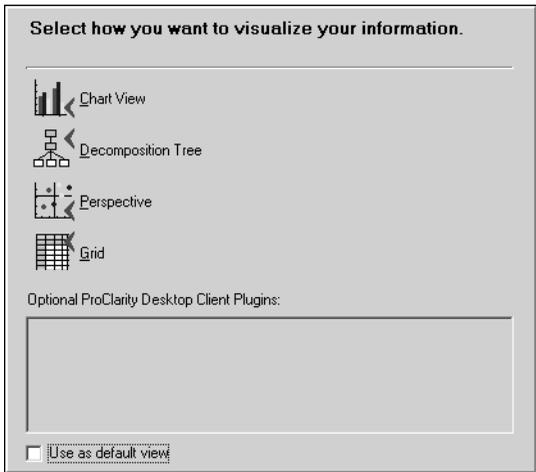
2. Click **OK**. The **Open Cube** window appears.



The Open Cube window

3. In the left pane, select a database from the list, and in the right pane, select a cube from the list.

4. Click **OK**. A box listing view types appears.



View Type selection box

5. Select an opening view type. The cube opens and is displayed in the selected view.

If you want a cube to always open in a specific view, check **Use as default view** before selecting a view type. Once you set a default view, all cubes will open in that view until you turn off the default view. To turn off the opening default view do the following:

1. From the **File** menu, select **Options**.
2. Click on the **Other** tab.
3. Clear the **Use the current default view** box.
4. Click **OK**.

The next time you open a cube, you will be able to select a different opening view.

Changing the OLAP Provider

Your OLAP Provider is your Online Analytical Processing (OLAP) server software. Microsoft OLE DB Provider for OLAP Services 8.0 is an example.

To change providers, do the following:

1. From the **File** menu, select **Options**.
2. Click the **OLAP Provider** tab and click **Select a new provider**.
3. After selecting a new provider, click **OK**, and the **Connect** screen will appear.

When you start subsequent sessions, ProClarity Desktop Client will default to the last provider used.

Connecting to a different server and cube

1. From the **File** menu, select **Open Cube**. The **Open Cube** dialog box appears.
2. To connect to a different server, click the **Connect** button.

3. In the **Connect** box, select a server or a local cube file.

4. Click on the type of view you want to use.

The ProClarity Desktop Client toolbar

The toolbar provides quick access to several of ProClarity Desktop Client's frequently used features. The following lists the available toolbar buttons and describes the purpose of each.



Wizard – Opens the Ad Hoc Query Wizard.



Book – Displays a list of current briefing book pages.



Decomp – Opens the Decomposition Tree Wizard.



Dimensions – Displays the Dimensions tool.



Drill Down – The button and down arrow display lists for drilling down on the displayed data.



Drill Up – The button and down arrow display lists for drilling up on the displayed data.



Page Edit – Allows you to edit a briefing book page.



English Query – Displays the English Query box that allows you to use text in English to query the data.



Execute – Performs a query when Auto-Execute is turned off.



Favorites – Displays a list of favorite views.



Filter – Displays the Filtering box.



Notes – Toggles a section of the screen in which to type notes.



Forward – Goes to the next view (enabled if you have moved backwards). The down arrow beside the button displays a list of previous views.



Back – Returns to the previous view. The down arrow beside the button displays a list of preceding views.



Reset – Restores the current view to the default setting.



Sort – Displays the Sorting box for arranging the data in a specified order.



Timeline – Displays the timeline, which is used as a shortcut to vary the Time dimension.



View – Changes the type of views displayed. The down arrow beside the button opens a menu of view choices.

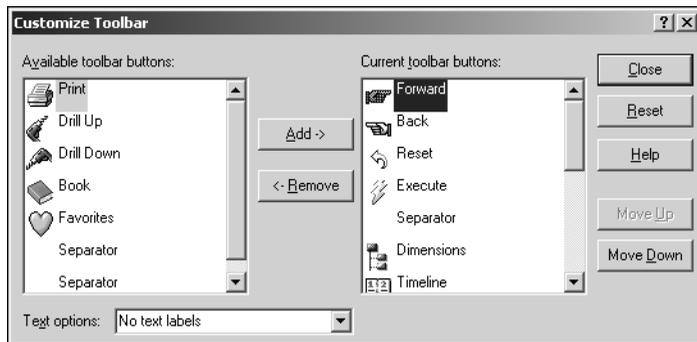


ProClarity Server - Allows users to publish, manage, and retrieve ProClarity Server briefing books. The down arrow beside the button opens a menu.

Customizing the toolbar

The ProClarity Desktop Client toolbar can be customized to display the tool buttons that you use most frequently. You can also display or hide the button names.

1. From the **View** menu, point to **Toolbar** and select **Customize**. The **Customize Toolbar** box appears.



Customize Toolbar box

2. Scroll through the list of **Available toolbar buttons** or **Current toolbar buttons** and select a button. Click **Add** to add a highlighted button to the toolbar, or click **Remove** to delete a highlighted button from the toolbar.

3. To rearrange the order of the buttons displayed on the toolbar, highlight a button in the **Current toolbar buttons** list and click either the **Move Up** or **Move Down** button until the toolbar button is in the position you want. The toolbar buttons will be displayed onscreen from left to right based on the top-to-bottom sequence in the list.
4. To display, reposition, or hide text labels from the toolbar, select an option from the **Text options** drop-down menu.

Moving among saved or current session views

When you move to a view, the view is displayed on the screen and becomes the current view. You can use the following to move among views:

Button	Menu command	Task
 	(No menu command)	Move back or forward through views you have opened in this session.
	From the Favorites menu, select Show Favorites .	Display a list of views you have saved as favorites. Select a view from the list to access the view.
	From the Book menu , select Show Book .	Display a list of pages you have saved in a briefing book. Select a page from the list to access the view.

Exiting ProClarity Desktop Client

To exit ProClarity Desktop Client, from the **File** menu, select **Exit**.

Chapter 3: Using Basic Data Query Techniques

This chapter is designed to get you started with data analysis by explaining how to create a chart or grid view using one of ProClarity Desktop Client's data analysis wizards—the Ad Hoc Query Wizard. It also explains how to use the Dimensions tool to select and arrange measures and dimensions.

About the Ad Hoc Query Wizard

Questions you have about specific data relationships are ad hoc questions. Some examples are: “How did the combined sales figures among each of my stores compare during last year?” or “How did the combined sales figures from all of my stores compare in each quarter of last year?” To find the answers, you can query (formulate a question to) the database. The Ad Hoc Query Wizard makes it easy to do this.

Using the Ad Hoc Query Wizard



Ad Hoc Query Wizard button To start the Ad Hoc Query Wizard, click the **Wizard** button.

On each screen, make selections to specify the measures and dimension members you want to include. To progress to the next screen, click **Next**. To change a selection from a previous screen, click **Back**. On the final screen, specify the arrangement you want, then click **Finish** to run the query. The result of the query is a view based on the measures, dimension members, and arrangement you have specified.

Each screen of the Ad Hoc Query Wizard provides the instruction needed for that screen. Also, each screen provides a **Help** button.

The following sections provide further explanation for the Time Value options and the Find feature.

Using the Time Value options

The Time dimension screen offers time value options as follows:

- **Period Value**—The actual value stored in the cube for the selected dimension members.
- **Year-to-date Value**—The sum of all periods since the start of the year.
- **Rolling Period Value**—The sum of values for the previous number of designated periods. For example, if you select a Rolling 3-Period Value with June selected as the month, the value displayed for June is the sum of the values for April, May, and June.

Note

By selecting **Rolling Period Value** or **Year-to-date Value**, you create a calculated measure (not supported by all OLE DB for OLAP providers). To learn more about calculated measures, see Chapter 8.

The Find feature

Each Dimension screen (except the Time dimension) offers a Find feature for finding members that belong to the dimension. For example, on the Product Dimension screen, you could find all members that contain the word “Beverages.”

To use the find feature, see the “Finding Dimension Members” section later in this chapter (page 27).

Using the Dimensions Tool

Using the Dimensions tool, you can select the specific items you want to analyze and specify their arrangement. The result of your selections is then reflected graphically in the view when you execute the query.

Executing a Query (refreshing a view)

When you use the Dimensions tool, you create a query. The query must be sent to the cube (or executed) to retrieve the requested data. The view is then “refreshed” to show the result of the query.

Queries can be executed in the following two ways:

- **Auto Execute:** The query executes and the view refreshes when you move the mouse cursor over the view. To enable the Auto Execute feature, from the **View** menu, select **Auto Execute**.
- **Manual Execute:** The query executes and the view refreshes when you click the **Execute** button. To manually refresh views, from the **View** menu, clear the **Auto Execute** command.



Execute button

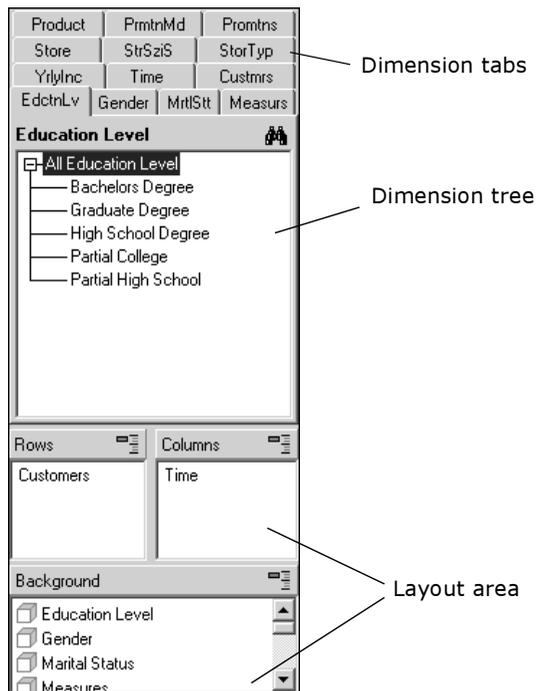
Selecting measures and dimension members

To display the Dimensions tool, do one of the following:



Dimensions button

- On the toolbar, click the **Dimensions** button.
- OR
- From the **View** menu, select **Dimensions**.



The Dimensions tool

The following explains how to select dimensions and measures using the Dimensions tool:

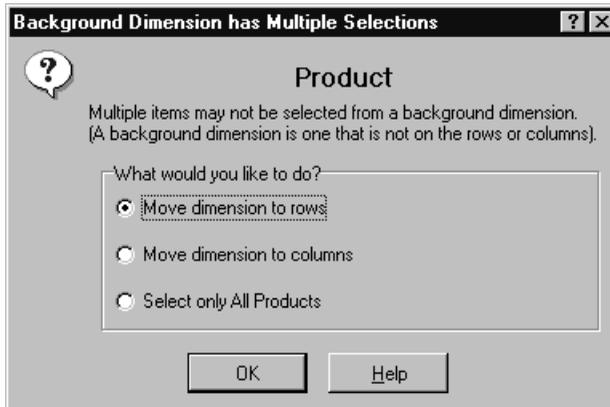
- To select measures, click the **Measures** tab.
- To select members from a particular dimension, click a tab.
- To select multiple members, hold down the **Ctrl** key while selecting.
- To select a range of adjacent members, click and drag the mouse to select the desired range.
- To select the descendents at a specific level, right-click on a member, point to **Select Descendents**, then select a level.
- See the following explanation for making Background member selections.

Making multiple selections on a Background item

You can select multiple members of a Background item if you do one of the following:

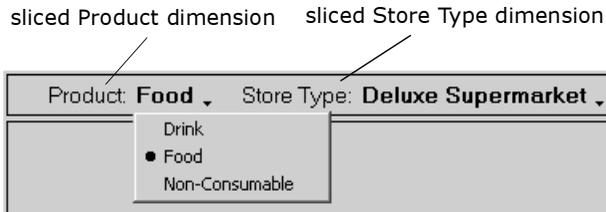
- **Option 1:** After selecting the Background members, execute the query.

When you execute the query, a box appears prompting you to choose an option for handling multiple selections.



The first two options move the dimension but retain the selections. The last option keeps the dimension in the Background but selects only one member (for example, the “All” member).

- **Option 2:** Before executing the query, “slice” the dimension. Right-click on the selected members and select **Slice Dimension**. Doing this creates a Slicer. The dimension name appears just under the title bar with a drop-down list of the members you selected. From this list, you may select one member, or one slice of data to display, at a time. Up to three dimensions may be sliced at a time.



Two displayed Slicers

Filtering and sorting are explained in Chapter 4. Briefing books are explained in Chapter 6.

Displaying a sliced dimension creates special considerations for filtering and sorting. Typically, you will display a slicer to use in a briefing book so that the briefing book users can change dimension members without having to use the Dimensions tool.

Finding dimension members

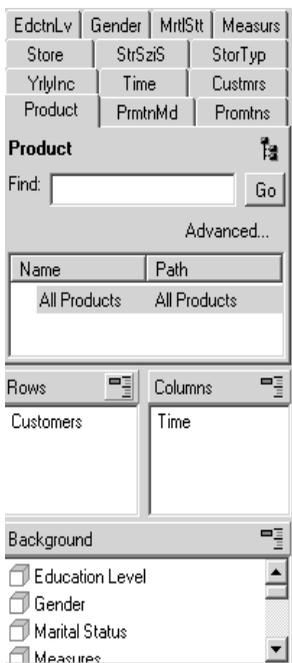
From a dimension tab, you can use the **Find** button to search for a member of the dimension.

 Find button

 enabled Find button

1. Click the **Find** button.

When the button is enabled, its appearance changes and the **Find** box replaces the Dimension tree.

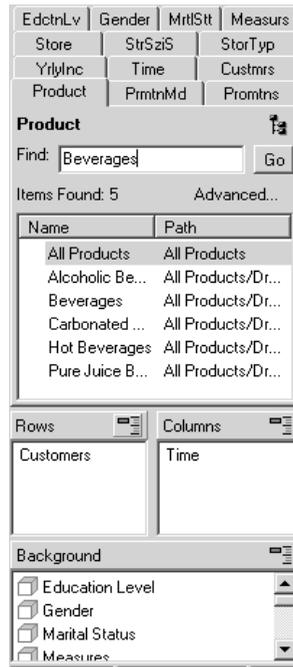


Find box replacing the Dimension tree

2. In the **Find** field, type in the name or partial name of the member you want to find. For example, if you want to find all Product members that include the word “Beverages,” type that word in the field.
3. Click **Go**.

The search may take several seconds to complete. When finished, a list appears of each member containing the words you entered and the member's place in the dimension hierarchy.

For help with the Advanced Find feature, see ProClarity Desktop Client Online Help.



Find box search results for "Beverages"

- From the list, select the items you want.
- Click the enabled **Find** button to close the **Find** box and return to the Dimension tree.



enabled
Find button

The tree is expanded and the specified dimension members are selected.

Hiding empty members

When using the Dimensions tool, you can hide dimension members that contain no data. Hiding applies to all dimensions arranged within the same section of the Dimensions tool.



Hide
button

1. On the Dimensions tool, click one of the **Hide** buttons to hide empty members for the Rows, Columns, or Background dimensions.



enabled
Hide button

The button changes to indicate that the Hide feature is enabled for that section of the Dimensions tool, and empty members belonging to the dimensions in that section are hidden in the Dimension tree.

2. Execute the query. Any empty members will be hidden from the view.

Filtering is explained in Chapter 4.

The Hide feature in the Dimensions tool affects filtering. For example, if you click the **Hide empty rows** button, the **Eliminate Empty rows** box is selected on the **Filtering** dialog box. Conversely, if you select **Eliminate Empty columns** on the **Filtering** box, the **Hide empty columns** button is selected on the Dimensions tool.

Turning off the Hide feature

To turn off the Hide feature so that empty members will display, do one of the following:



enabled
Hide button

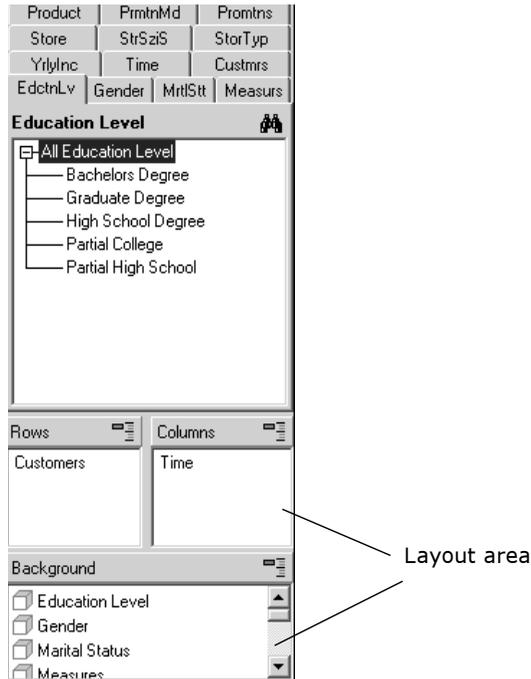
- On the Dimensions tool, click the enabled **Hide** button, then execute the query.

OR

- Right-click on the background of a chart or grid and select **Filtering**. In the **Filtering** box, clear one or both of the **Eliminate Empty** check boxes.

Arranging the layout

Use the layout area of the Dimensions tool to move measures and dimensions into Rows, Columns, and Background.



The layout area of the Dimensions tool

Keep the following in mind as you arrange the layout:

- Row and column items are creating visual relationships. Background data is still relevant, but it is not graphically visible.
- You must have at least one item in each of the Rows and Columns areas.

Tips

- To see more detail about an item in the layout area, point to the item.
- If you double-click an item listed in the Rows, Columns, or Background areas, the corresponding dimension tab displays.

Changing the display format for the Dimensions tool tabs

1. From the **File** menu, select **Options**.
2. Select **Other**.
 - To display horizontal scrollable tabs, clear the **Use cascading tabs in Dimensions tool** option.
 - To display cascading tabs, select the option.

Chapter 4: Using Charts and Grids to Explore Data

Frequently, a view that you create to answer one question will lead you to ask other questions and probe other data relationships. For example, suppose a view answers the question, “How did sales for my Northwest stores compare over last year?” The same view may raise another question: “Store #3 had the most sales last year. Was this true for each quarter?” The answer to this question may make you wonder, “What products at Store #3 contributed to its success in the second quarter?” This process of one answer (or view) leading to the next question, which leads to the next view, etc., is involved in data exploration.

You could explore data using only the Dimensions tool (explained in Chapter 3) to vary your data display. However, ProClarity Desktop Client provides several other tools that simplify data exploration. Using these tools, you can quickly rearrange (pivot) dimensions, display lower or higher levels of data hierarchy (drill down, drill up, expand, and collapse), obtain a list of transactions that make up value (drill to detail), and focus on select dimension members (isolate and eliminate).

You can also explore data using various view types such as charts, grids, the Decomposition Tree, and Perspective. Each type has features that allow you to view comparisons, trends, and relative percentages among the data.

This chapter explains tools you will frequently use to explore data within the chart and grid view types. These tools are not used in any particular order. As one question leads to another, you use whatever tool is appropriate to the question you have in mind at the time.

Obtaining a chart or grid view

Data views can be displayed in full-screen formats, or on a split-screen containing a grid and one other format.

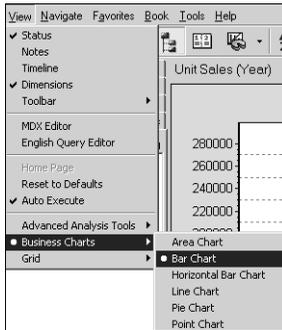
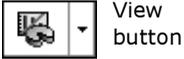
Displaying a chart

1. On the **View** menu, point to **Business Charts** and then select a chart type.

OR

Click the down arrow beside the **View** button to display a drop-down menu.

2. Point to **Business Charts**, then select a chart type to display the desired chart view.



Choosing a chart type from the View menu

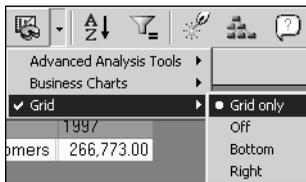
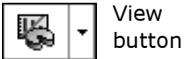
Displaying a grid

1. On the **View** menu, point to **Grid**, then select a grid display option.

OR

Click the down arrow to the right of the **View** button to display a drop-down menu.

2. Point to **Grid** and select a grid display option.



Displaying a full-screen grid using the View button

Displaying a chart and grid in a split-screen

1. Select a chart type from the **Business Charts** drop-down menu.
2. From the **Grid** drop-down menu, select **Bottom** or **Right** to display the grid with a chart in the view.

toggling between views



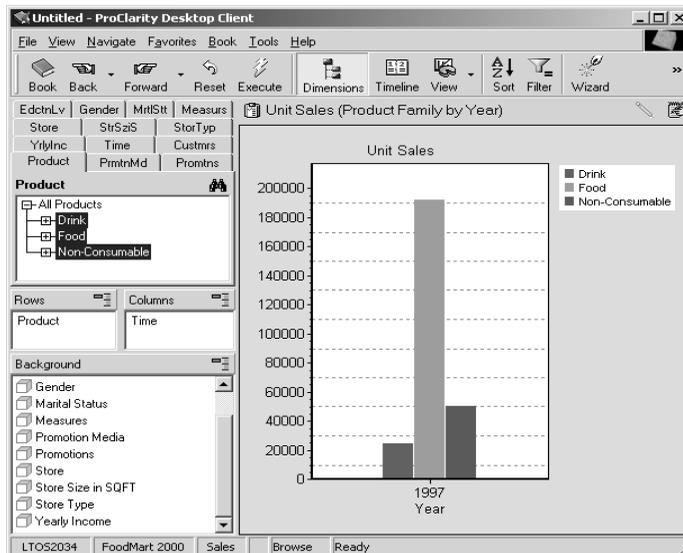
View
button

If you want to quickly switch view formats, click the **View** button. Each time you click the button, the view changes to the next view option shown on the **Grid** menu.

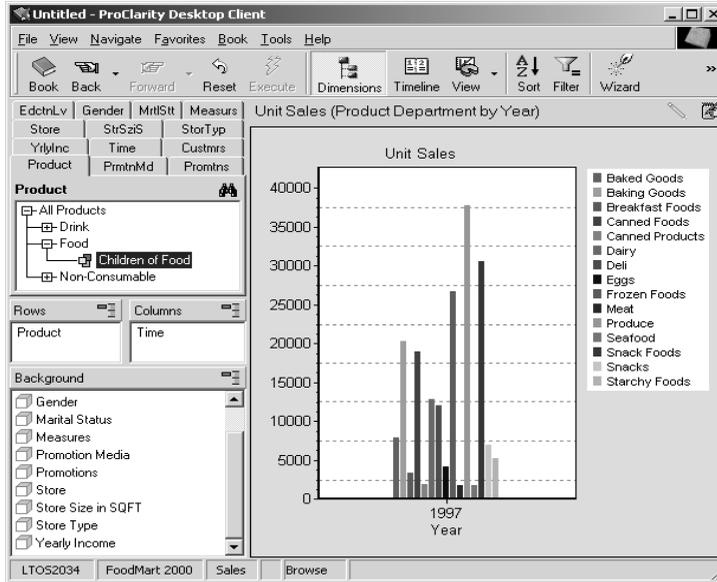
Drilling down

Drilling down enables you to see the comparisons among lower-level members of a dimension's hierarchy. Drilling down increases the amount of detail being displayed.

For example, suppose you have a view comparing store sales of Drink, Food, and Non-Consumable Products during a year. If you want to see comparisons among Food items, you can drill down on the Food member. The following two views illustrate the result.



View before drilling down



View after drilling down on "Food"

You can drill down in the following ways:

- Drill down directly on the chart or grid. This is the quickest way to drill down on a single dimension member.
- Right-click on the chart to display a menu. Point to **Drill Down** and select an option.

Tips

- To visualize the change in your dimension selections, before you drill down, display the Dimensions tool and click the tab for the dimension on which you will drill down. When you drill down, you will see the new member selections.
- When you drill down, the selected member in the Dimensions tool is "Children." To see the members, right-click on Children and select **Show Items**.

Drilling down directly on a chart or grid

1. Move the mouse cursor over a chart, the chart Rows legend, or a grid. The cursor changes to a drill when you pass over an area representing dimension members that you can drill down on.
2. Click on the area you want to drill down.



drill down
cursor

- On a chart, the first row item that is not already at its lowest level is drilled down.
- On a grid, the row or column item you click is drilled down.

Using the right-click menu to drill down

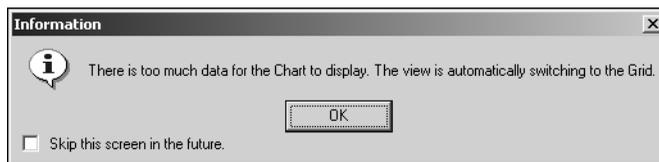


drill down
cursor

1. Move the cursor over a chart, the chart Rows legend, or a grid. The cursor changes to a drill when you pass over an area that can be drilled. Right-click an area and point to **Drill down**.
 - To drill down on a single item, select the item.
 - To drill down on more than one item, click **Select item(s) from list** to open the **Drill down** box. Then hold down the **Ctrl** key while selecting items. Click **OK** to update the view.
 - The right-click list includes Background dimensions. If you drill down on a Background dimension, it automatically moves to the Rows and is displayed in a drilled-down state—all members from the next-lower level are selected and displayed.
2. From the list, select the items you want to drill down.

Automatic switch to grid

During drill down on a chart, the query may return too much data for a chart display. The following message will appear.



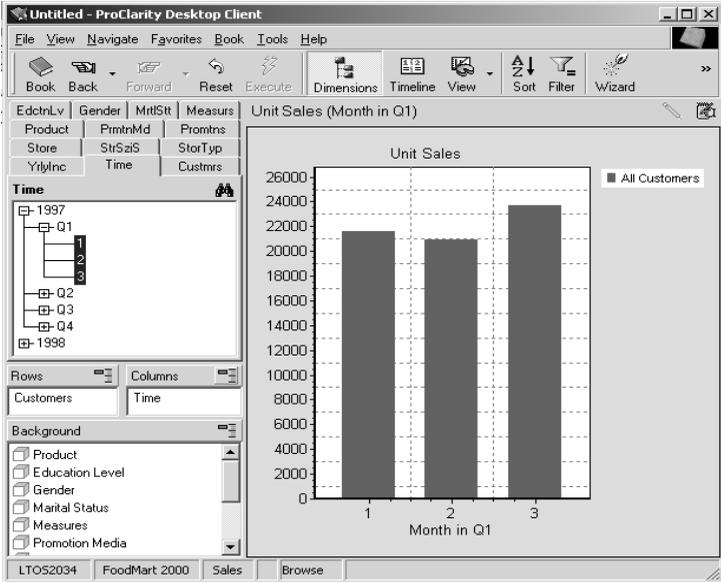
Click **OK** to see a grid view of the data.

Drilling up

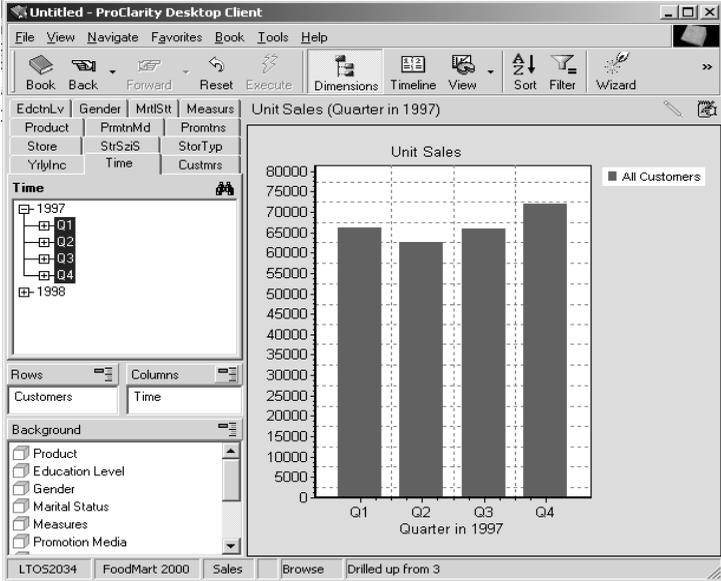
Drilling up enables you to see the comparisons among higher-level members of a dimension's hierarchy. Drilling up decreases the level of detail being displayed.

For example, suppose you have a view comparing sales for three months of a quarter and you want to view the quarter data. You could drill up on any of the months currently displayed. The following examples illustrate this.

Using Charts and Grids to Explore Data



View before drilling up



View after drilling up on any of the months

In order to drill up on a dimension, it must be in either the Rows or Columns.

You can drill up in the following ways:

- Hold down the **Shift** key and click directly on the chart or grid. This is the quickest way to drill up on a single dimension member.
- Right-click on the chart to display a menu. Point to **Drill Up** and select an option.

Tip

To visualize the change in your dimension selections, before you drill up, display the Dimensions tool and click the tab for the dimension on which you will drill up. When you drill up, you will see the new member selections.

Drilling up directly on a chart or grid



drill up
cursor

1. Hold down the **Shift** key while moving the cursor over a chart, the chart Rows legend, or a grid. The cursor changes to a drill with an up arrow when you pass over an area representing dimensions members that you can drill up on.
2. Continue holding down the **Shift** key, and click the member you want to drill up on. The new view reflects your selection.

Using the right-click menu to drill up



drill up
cursor

1. Move the cursor over a chart, the chart Rows legend, or a grid. The cursor changes to a drill with an up arrow when you pass over an area that can be drilled. Right-click an area and point to **Drill Up**.
2. From the list, select the items you want to drill up.
 - To drill up on a single item, select the item.
 - To drill up on more than one item, click **Select item(s) from list** to open the **Drill Up** box. Then hold down the **Ctrl** key while selecting items. Click **OK**. When you do, the view is updated.

Drilling To Detail

Drill To Detail allows you to obtain a list of individual transactions, or records, that make up a value. To use Drill To Detail, the feature must be

enabled for the cube (see your cube administrator for more information about enabling this feature).

Note

Before you use this feature, either drill down on an item to the lowest hierarchy level, or limit the number of records that will be retrieved. Otherwise, Drill To Detail may take a long time to complete. (For the procedure to restrict retrieved records, see "Limiting the Number of Records Retrieved" on page 41.)

1. Right-click on one of the following:

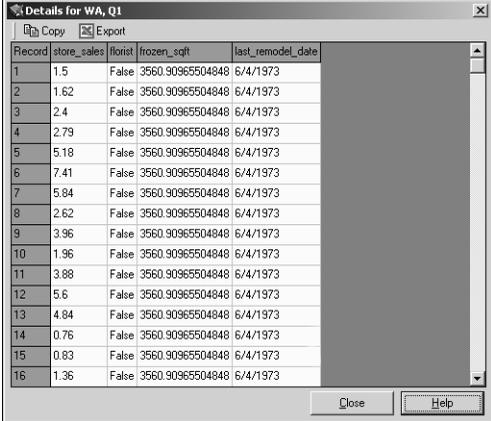
For more information about the Decomposition Tree and Perspective tool, see Chapter 5.

- A grid value.
- A chart series (bar or pie slice) or an item listed in the chart Rows legend.
- A Decomposition Tree node.
- A Perspective data point.

2. Grid or Perspective: Select **Drill To Detail**.

Chart or Decomposition Tree: Point to **Drill Down**, then select **Drill To Detail**.

When Drill To Detail is finished, a list of records is displayed.



Record	store_sales	flloist	frozen_sqft	last_remodel_date
1	1.5	False	3560.90965504848	6/4/1973
2	1.62	False	3560.90965504848	6/4/1973
3	2.4	False	3560.90965504848	6/4/1973
4	2.79	False	3560.90965504848	6/4/1973
5	5.18	False	3560.90965504848	6/4/1973
6	7.41	False	3560.90965504848	6/4/1973
7	5.84	False	3560.90965504848	6/4/1973
8	2.62	False	3560.90965504848	6/4/1973
9	3.96	False	3560.90965504848	6/4/1973
10	1.96	False	3560.90965504848	6/4/1973
11	3.88	False	3560.90965504848	6/4/1973
12	5.6	False	3560.90965504848	6/4/1973
13	4.84	False	3560.90965504848	6/4/1973
14	0.76	False	3560.90965504848	6/4/1973
15	0.83	False	3560.90965504848	6/4/1973
16	1.36	False	3560.90965504848	6/4/1973

Details list for Drill to Detail

- To copy the list to the Clipboard, click the **Copy** button.
- To export the list to a Microsoft Excel spreadsheet, click the **Export** button.

3. To return to the view, close the **Details** list.

Limiting the number of records retrieved

For more information about the Decomposition Tree and Perspective tool, see Chapter 5.

1. Right-click on the background of a chart, grid, Decomposition Tree, or Perspective view and select **Properties**.
2. From the list on the left, click **Drill To Detail**.
3. Click **Maximum records to Retrieve**, then enter a number.
4. Click **OK**.

Using navigation features

While drill up and drill down are most easily accessed directly from a chart or grid, these functions can also be accessed from the **Navigate** menu. The **Navigate** menu also provides four other tools for exploring data:

- **Expand**—allows you to drill down on one displayed member while leaving the remaining members at their current hierarchy levels.
- **Collapse**—does just the opposite of expanding while leaving the remaining members at their current hierarchy level.
- **Isolate**—allows you to focus your analysis on only a few members.
- **Eliminate**—is useful for removing a member that is skewing results or members that are irrelevant to the view.

1. From the **Navigate** menu, point to the option you want.
A list appears.
2. Select a dimension member.
 - To select a single member, click it.
 - To select multiple members, click **Select item(s) from list** to open another list. Hold down the **Ctrl** key while you select the members you want, then click **OK**.

The new view will reflect your selections.

Pivoting dimensions

During data analysis you may want to change the arrangement of your data to emphasize various relationships (see the “relevant data and its arrangement” discussion on page 5). When you pivot a view, the Rows dimensions switch to being in Columns, and the Columns dimensions switch to being in Rows.

To pivot dimensions, do the following:

1. Right-click on the background of a chart or grid.
2. Click **Pivot**.

Using the timeline



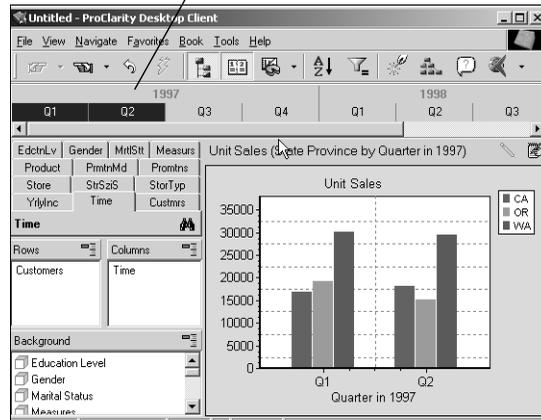
Timeline button

To display the timeline, from the toolbar, click the **Timeline** button.

If there are multiple Time dimensions in the current cube, you will be given a choice of which one to display in the timeline.

When the timeline is visible, you can use it to isolate a time period or to expand and collapse a time period.

Timeline



View with the Timeline visible

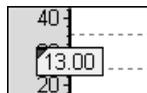
- To isolate a time period, select it on the timeline. To select multiple periods, hold down the **Ctrl** key while selecting.
- To expand or collapse time periods, right-click on the **timeline**. From the list that appears, select a time level. The timeline updates.

Using Actions

An Action is supplemental information about a dimension or member, such as a Web site, spreadsheet, or text document. Actions are created and maintained by the cube administrator.

The indicator that an Action is available—a small green triangle —appears in the following places:

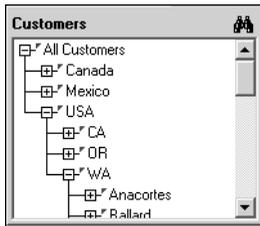
- *On a chart*— In the callouts that appear when you touch the mouse to the Rows legend



- *On a grid*—In individual cells

Measures:Unit Sales		
	Q1	Q2
Aimee Brown	6.00	
Ashley Whalley	7.00	19.00
Aurelia Olguin	4.00	
Barbara Mohar		

- *On the Dimensions tool*—Next to dimension or member names



To access an Action, do the following:

1. Right-click on the item denoted with a green triangle.
2. Point to **Actions** to display a list of available Actions.
3. Select one of the listed Actions to open it.
4. Close the document (or Web site) to return to your data analysis.

Using the Analyze feature

The Analyze feature allows you to use a Decomposition Tree to explore a selected value.

For more information about the Decomposition Tree and Perspective tool, see Chapter 5.

1. Select a value you want to analyze by right-clicking on one of the following:
 - *Chart*—A chart series (bar or pie slice) or an item in the Rows legend
 - *Grid*—A grid cell value
 - *Perspective*—A Perspective data point
2. Point to **Actions**, and select **Analyze**. The value you selected to analyze becomes the top node of a Decomposition Tree.

Filtering data

While exploring data, you may prefer to work with only subsets of the data. For example, you may wish to include only those products that rank in the top 20% by sales dollars.

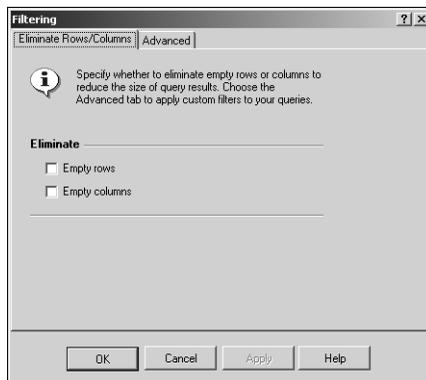
One reason to work with a subset is that some of your dimension groups (hierarchies) may contain a very large number of members. For example, the distributor group of an indirect customer dimension could contain over 100 members. When you want to include such a dimension in an analysis, use filtering to create a smaller subset to work with. Doing so will reduce the amount of time a query (such as a drill down) requires to return a result, and the result will be more readable.

Tips

- Because filtering criteria relates to rows and columns, it is easier to visualize the data being filtered if you display a grid view or split chart and grid view.
- You can display subtotals to filter by.
Right-click on a grid background and select **Subtotals**.
- If a slicer is displayed, special filtering considerations apply. Consult ProClarity Desktop Client Online Help.

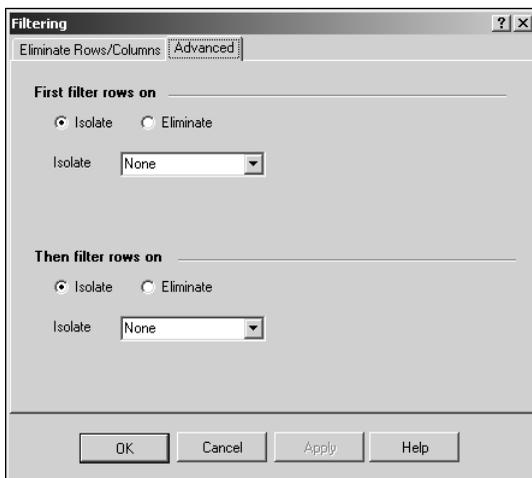
Using the Filtering feature

1. Right-click on the background of a chart or grid.
2. Select **Filtering** to open the tabbed **Filtering** box.



Filtering box

3. To hide columns or rows that are empty (contain no data values), select one or both of the check boxes. Note that these check boxes correspond to the Hide feature in the Dimensions tool (see page 29).
4. To select other filter criteria, click the **Advanced** tab.

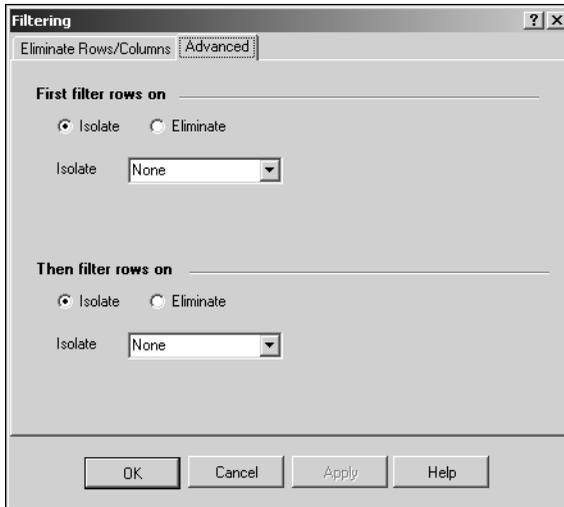


Advanced Filtering tab

5. In the primary filter area (**First filter rows on**), click **Isolate** or **Eliminate**.
6. Click the **down arrow**  to select a criterion. The following explains the filtering criteria:

None	No filtering. Choose this option to turn off the filtering function.
Top (Count)	The rows that contain the top (count) values.
Bottom (Count)	The rows that contain the bottom (count) values.
Top (%)	The rows that compose the top specified percentage of the column.
Bottom (%)	The rows that compose the bottom specified percentage of the column.
Top (Sum)	The rows with the largest values that, when summed, compose at least the value you specify.
Bottom (Sum)	The rows with the smallest values that, when summed, compose at least the value you specify.
Above	The rows that have values above the number you specify.
Below	The rows that have values below the number you specify.
Between	The rows that have values between the two numbers you specify.

After you select a filtering option, more selection boxes appear.



Advanced Filtering tab with criteria selected

7. Enter the count, percentage, or amount for the criterion.

8. In the **Based on** boxes, select the filter details.

- Select a column for the first box.
- Select a measure for the second box. You can select any measure contained in the cube, even if it is not a currently displayed measure.

9. (Optional) To define a secondary filter, complete the **Then filter rows on** area. Secondary filters are applied to the data that remains after the primary filter is applied.

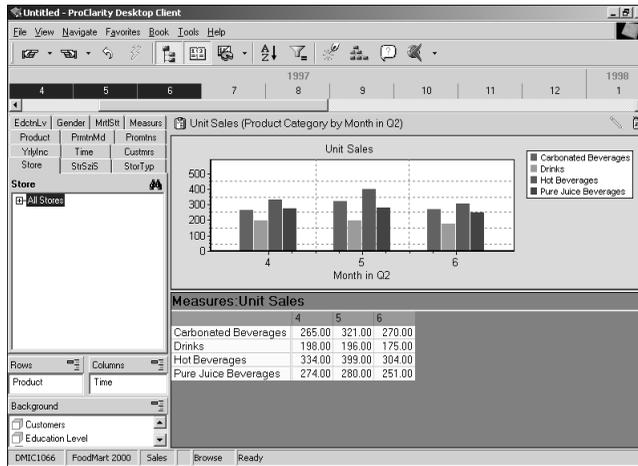
10. Click **OK** to view the result of the filtering sections.

Filters remain in effect until you do any of the following:

- Select **None** as the filtering criteria.
- Change the layout view using the Dimensions tool (see “Arranging the layout” on page 31).
- Reset the view (see “Resetting the View to Defaults” at the end of this chapter).

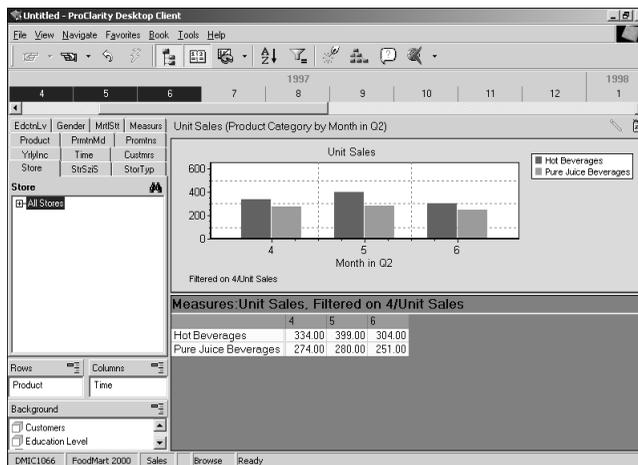
Understanding how to filter rows based on columns

You filter row data based on column data. The following illustrates this concept.

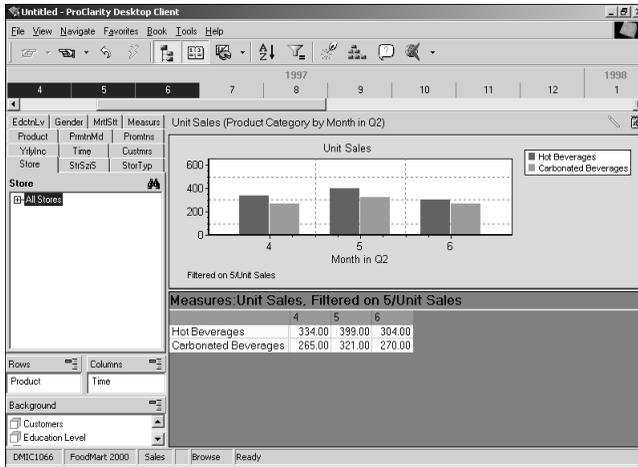


Data before filtering

Isolating the top two rows based on the 4 column and the 5 column respectively, would display the following differing results:



Result of isolating the Top 2 rows based on the 4 column



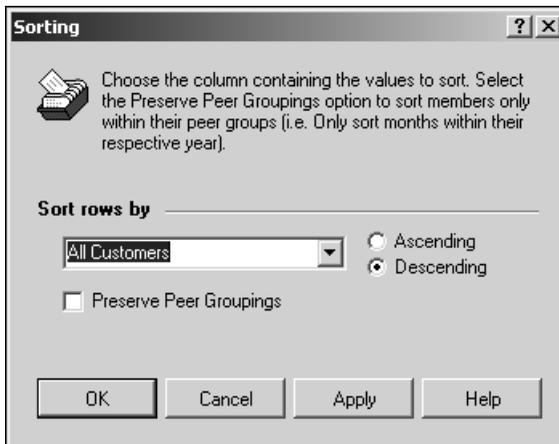
Result of isolating the Top 2 rows based on the 5 column

Sorting data

The sort function allows you to display data sequentially in ascending or descending order.

Using the Sort function

1. Right-click on the background of a chart or grid.
2. Select **Sorting** to open the **Sorting** box.



The Sorting box

3. Click the **down arrow**  to select the column by which you want to sort the rows.
4. Click **Ascending** or **Descending**.
5. Click **Preserve Peer Groupings** to restrict sorting within the groups contained in the row dimensions.
6. Click **OK**.

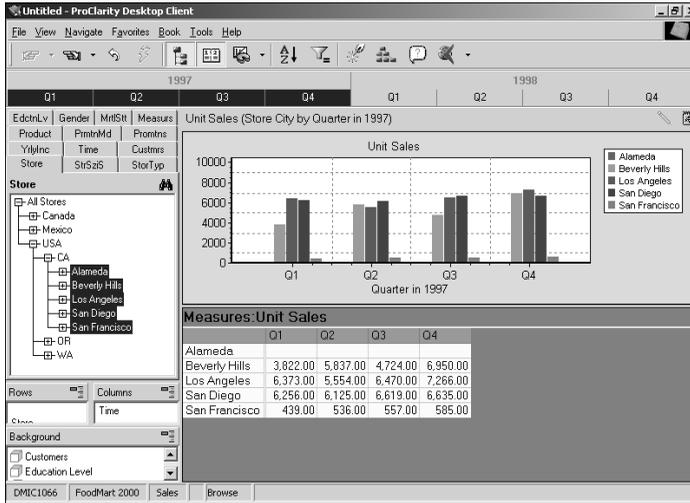
The new view will reflect your selections.

Sorting remains in effect until you do one of the following:

- Select **None** as the filtering criteria.
- Change the layout view using the Dimensions tool (see “Arranging the layout” on page 31).
- Reset the view (see “Resetting the View to Defaults” at the end of this chapter).

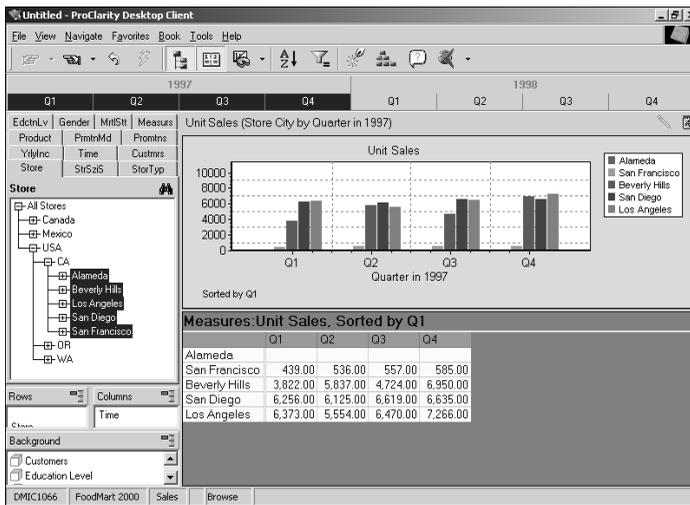
Understanding how to sort rows by columns

You sort rows data by columns data. The following illustrates this concept:

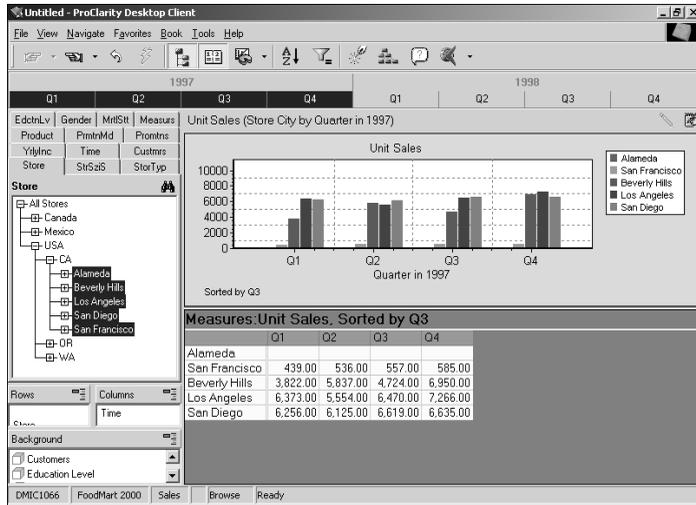


Data before sorting

Sorting the data in ascending order by Quarter 1 and Quarter 3, respectively, displays the following differing results:



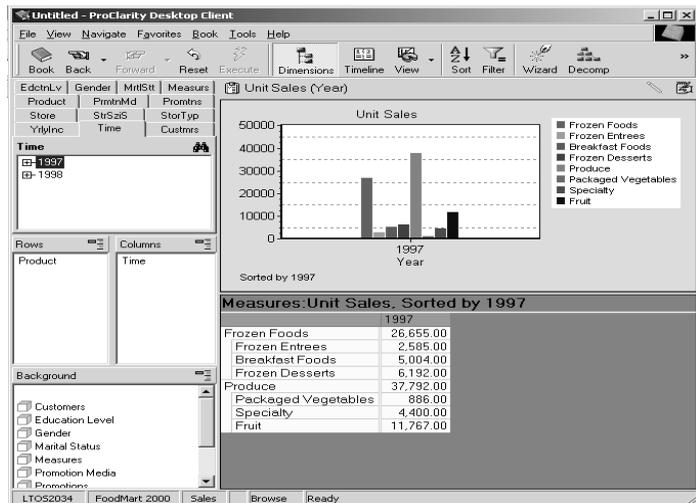
Result of sorting in ascending order by Quarter 1



Result of sorting in ascending order by Quarter 3

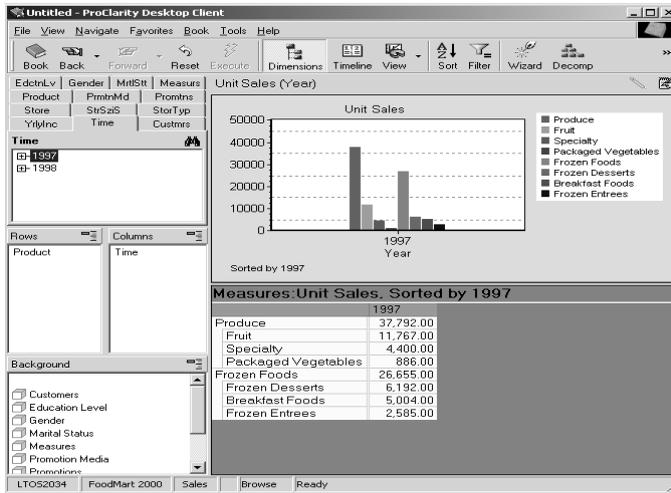
Understanding peer groupings

If you have only one dimension on the Rows, you can preserve peer groupings. Preserving peer groupings restricts sorting within the groups contained in the Rows dimensions. If you do not preserve peer groups, sorting applies to all items. The following illustrates this concept:

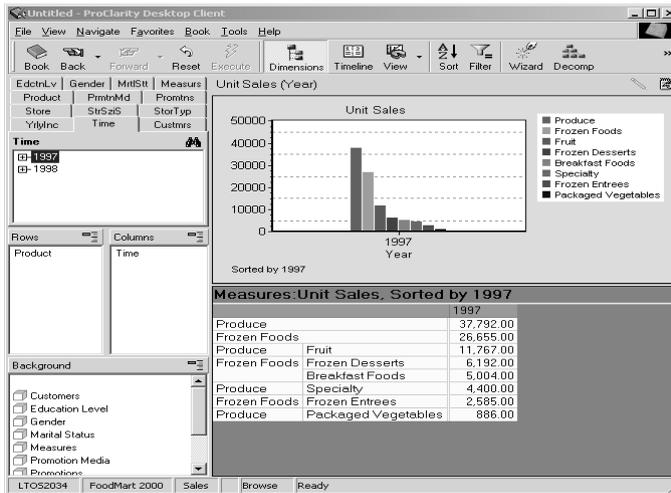


Data before sorting

Using Charts and Grids to Explore Data



Result of sorting with Preserve Peer Groupings selected



Result of sorting without Preserve Peer Groupings selected

Modeling (writeback)

You can change data values to create a model for tasks such as forecasting and budgeting. When you use modeling (also called “writeback”) to change a value, data contributing to that value changes also according to the allocation you specify.

Notes

- The modeling feature is available only if the current cube has been write-enabled. If some of the menu commands or buttons described below are not available, see your system administrator.
 - Before you use modeling, drill down on your data so that you are at the lowest level possible in the hierarchy. Otherwise, the modeling function may take a long time to complete.
-

To display a chart toolbar, right-click on the background of a chart and select **Toolbar**. See page 59 for more information about using the chart toolbar.



Write Back button

1. From the **File** menu, point to **Modeling**. If **Enable Grid Editing** is not checked, select it.
2. Obtain the **Modeling Options** box by doing one of the following:
 - On a grid, click a cell and type in a new value.
 - On a chart, right-click a series (example: bar or pie slice), point to **Advanced**, and select **Edit Value**.
 - On a displayed chart toolbar, click the **Write Back** button, then drag the part of the chart representing the value you want to change (example, a bar or pie slice).
3. In the **Modeling Options** box, specify the new values and how to allocate them.
4. Click **OK**.
5. To save the changes to the cube, from the **File** menu, point to **Modeling**, then select **Commit**. To cancel the changes, from the **File** menu, point to **Modeling**, then select **RollBack**. This will restore values existing since the last Commit.

Refer to Online Help for more information about using specific features of the **Modeling Options** box.

Special grid features

ProClarity Desktop Client provides a variety of features you can use to customize the way grids arrange and display data. The following sections discuss four of these features:

- Subtotaling
- Exception Highlighting
- Changing grid properties
- Specifying value and percent of total options

Subtotaling

When cube data is displayed in a grid, you can display and hide subtotals. Subtotals can be calculated for data in Columns, Rows, or both. You can also filter and sort by subtotals.

1. Right-click on the background of a grid.
2. Point to **Subtotals**.
3. Select the subtotal display option you want to use. The corresponding subtotals will be added to the grid.
4. To remove subtotals from the grid, select **Off** from the **Subtotals** menu.

Note

Subtotals will continue to be displayed for all future grid views until you turn them off.

Exception Highlighting

You can format grids so that values within specified ranges are highlighted.

1. Right-click on the grid and select **Exception Highlighting**.
2. In the first **Exception Condition 1** box, select the exception you wish to highlight.
3. Use the arrows in the subsequent boxes to define the limits of the exception.
4. To define the appearance of the exceptions, click the **Configure Highlight Format** button and choose colors and font styles. An example of your selections appears in the **Highlight Preview** box.

5. To specify another exception, click **Add**.
6. When you have defined all exceptions, click **OK**.

Tip

To eliminate a defined exception, click **Delete** and select the exception you wish to delete.

Cell formatting properties are properties (such as background color and font style) that may have been set in the database to flag certain conditions. For more information about them and how they affect Exception Highlighting, see ProClarity Desktop Client Online Help.

Changing grid properties

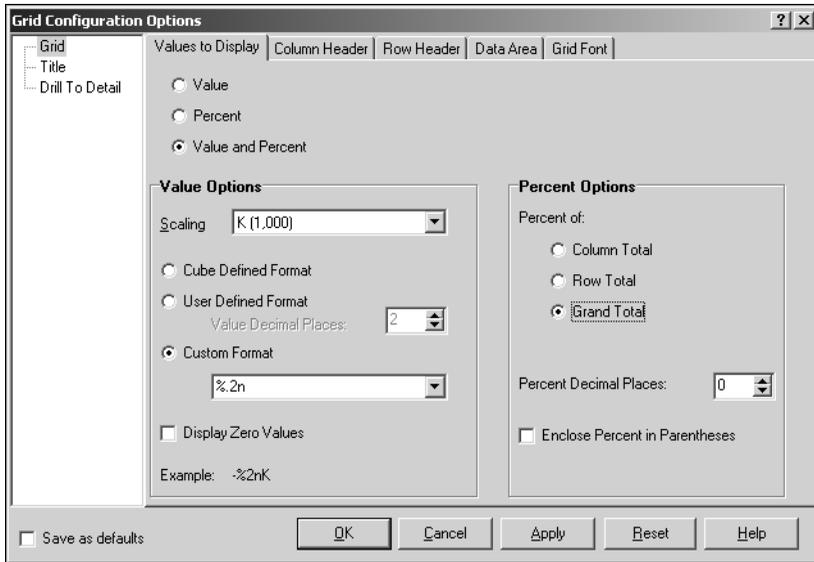
On the **Grid Configurations Options** box, you can change the grid colors and fonts, set Drill To Detail limits, and select whether to use cell formatting properties. You can also specify value formats and percentages for display, which is discussed in the next section, “Specifying Value and Percent of Total Options for the Grid.”

1. Right-click on a grid and select **Properties** to display a **Grid Configurations Options** box.
2. From the list on the left side of the box, select the feature you want to change.
3. Click the appropriate tab.
4. Select the properties you want from the tabbed page.
5. When you are finished making changes, click **OK**.

The following section explains more about the **Values to Display** tab of the **Grid Configurations Options** box.

Specifying value and percent of total options for the grid

The options on the **Values to Display** tab of the **Grid Configuration Options** box allow you specify how values should display, and whether and how percentages of totals should display. Percentages of totals indicate the contribution of a cell value to a specified total.



The Values to Display tab

The following illustrates a grid that displays values scaled to thousands and percentages of the grand total.

	1997		Subtotal	
Subtotal	84.12K	100%	84.12K	100%
Frozen Foods	26.66K	32%	26.66K	32%
Meat	2.58K	3%	2.58K	3%
Frozen Entrees	2.59K	3%	2.59K	3%
Pizza	3.31K	4%	3.31K	4%

Grid with Percent of Grand Totals displayed

Online Help provides a detailed description of how to use Value and Percent Options.

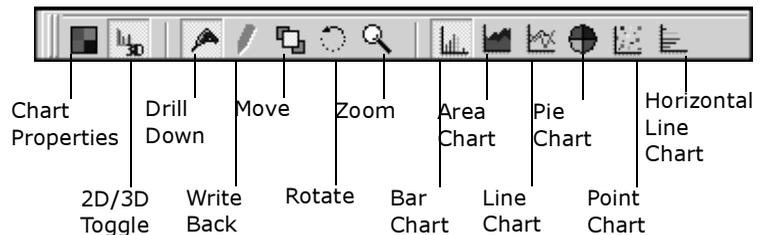
Special chart features

ProClarity Desktop Client provides a variety of features you can use to customize the way charts arrange and display data. This section discusses the following:

- The chart toolbar
- Working with three-dimensional charts
- Customizing chart axes
- Changing how series are displayed
- Changing chart properties

The chart toolbar

ProClarity Desktop Client provides a separate toolbar you can use to conveniently select chart types and change the data display.



The chart toolbar

To display the chart toolbar, right-click on the background of a chart and select **Toolbar**.

Working with a three-dimensional chart



2D/3D Toggle button

On the chart toolbar, click the **2D/3D Toggle** button. When the chart is three-dimensional, the **Move**, **Rotate**, and **Zoom** buttons are active.

Using Move



Move button



Moving tool

1. On the chart toolbar, click the **Move** button. The cursor becomes a moving tool.
2. Hold down the left mouse button while dragging the cursor over the chart. The chart moves in the direction of the cursor.

Using Rotate



Rotate button



Rotation tool

1. On the chart toolbar, click the **Rotate** button . The cursor becomes a rotation tool .
2. Hold down the left mouse button while dragging the cursor over the chart. The chart rotates in the direction of the cursor.



Zoom button



Zoom tool

Using Zoom

1. On the chart toolbar, click the **Zoom** button . The cursor becomes a zoom tool .
2. Hold down the left mouse button while dragging the cursor over the chart. To zoom out, move the cursor up. To zoom in, move the cursor down.

Tip

For ways to specify exactly how much to Zoom, Rotate, or Move a chart, see Online Help.

Customizing chart axes

The following procedures describe how to change the scale and position of chart axes and rotate axes labels.

Scaling an axis

1. Right-click on the background of a chart and select **Chart Properties** to display the **Chart Properties** box.
2. From the list on the left, select the appropriate chart axis.
3. Click the **Axis Scaling** tab.
4. Set the scaling options you want to use.
5. Click **OK**.

Positioning an axis

By default, ProClarity Desktop Client scales all series (row items) to the left axis (or for horizontal bar charts, the top axis). However, you can include a second axis for one or more series and set separate scaling on each axis. This is particularly useful when two row measures have distinctly different measurement units (for example, an item count vs. a growth percentage).

1. Right-click on a chart series (example: a bar chart bar) or on an item in the Rows legend, and select **Series Properties**.

2. For the Y Axis, click **Right** (or for the X Axis, click **Bottom**).

To scale either the right or left axis, follow the above "Scaling an axis" procedure.

Tip

On the **Chart Properties** box, select **Auto Y Axis** to automatically set a second axis when the Rows include more than one measure.

Rotating axes labels

1. Right-click on the background of a chart and select **Chart Properties** to display the **Chart Properties** box.
2. From the list on the left, select the appropriate chart axis.
3. On the right, click the appropriate **Axis Labels** tab.
4. Select the **Rotate Axis Labels** check box.

Changing how series are displayed

Each member of a row dimension is a series. Series are represented by the bars, areas, pie slices, lines, or points of a chart and by the individual entries on the Rows legend.

You can customize the appearance of a series in two ways:

- Changing the chart type for a series using the **Series Type** option.
- Changing the display properties for a series using the **Series Properties** option.

Change the chart type for a series

1. Right-click on a series (a bar or pie slice) or an item listed in the Rows legend.
2. Point to **Series Type** and select a chart type for the series. The chart changes to reflect your selection.

Change the display properties for a series

1. Right-click on a series or an item listed in the Rows legend.
2. Select **Series Properties** to display the **Series Configuration** box.

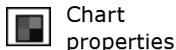
3. In the **Series Configuration** box, make selections to customize the type, style, color, and axis.
4. Click **OK**.

For more information about changing the Series Properties, refer to Online Help.

Changing chart properties

You can customize the appearance of charts by changing the colors, text formats, and value formats in the **Chart Properties** box.

1. Right-click on the background of a chart and select **Chart Properties**.



OR

From the chart toolbar, click the **Chart Properties** button.

2. From the list on the left side of the **Chart Properties** box, select the feature you want to change.
3. Click the appropriate tab.
4. Select the properties you want from the tabbed page.
5. When you are finished making changes, click **OK**.

Refer to ProClarity Desktop Client Online Help for more information about customizing the appearance of a chart.

Resetting the view to defaults

After using various features to explore your data, you may want to restore the view to its default settings.

To do this, from the **View** menu, select **Reset to Defaults**.

- All dimension hierarchies are rolled up to the highest level.
- All sorting and filtering is turned off.
- The view type becomes a vertical bar chart.

Chapter 5: Using the Decomposition Tree and Perspective Tool

This chapter introduces you to the Decomposition Tree and Perspective tool, and explains how to display a Web page in a view. For more detailed information about the specific features and use of these tools, refer to ProClarity Desktop Client Online Help.

Using the Decomposition Tree

The Decomposition Tree allows you to visually decompose information along any dimension and expose the contributing factors. Using Decomposition Trees, you can answer questions such as “Which foods are the biggest sellers?” or “What percentage of the overall Quarter 2 sales are represented by canned foods?”

A Decomposition Tree breaks a measure apart (decomposes it) into its subcomponents, then displays the subcomponents in a hierarchical tree and a pareto chart. Decomposition Trees can order data from largest to smallest or from smallest to largest. Decomposed data is provided both in raw numbers and in percentages of total. In addition, pareto charts show what components fall above or below a particular percentage, enabling you to quickly identify components that contain the greatest percentage of the total.

The Decomposition Tree Wizard guides you through the steps necessary to create a Decomposition Tree. By selecting values from a series of screens, you determine the measure to be decomposed and the dimensions to be included at the starting point of the tree.

Note

It is recommended that you close the Dimensions tool before creating a Decomposition Tree view. It will give you more space and eliminate confusion as to which members are selected in the view.

Creating a Decomposition Tree

The Decomposition Tree Wizard allows you to specify the measure and starting decomposition point for a Decomposition Tree.

1. Open the Decomposition Tree Wizard by doing one of the following:



- On the toolbar, click the **Decomp** button.

OR

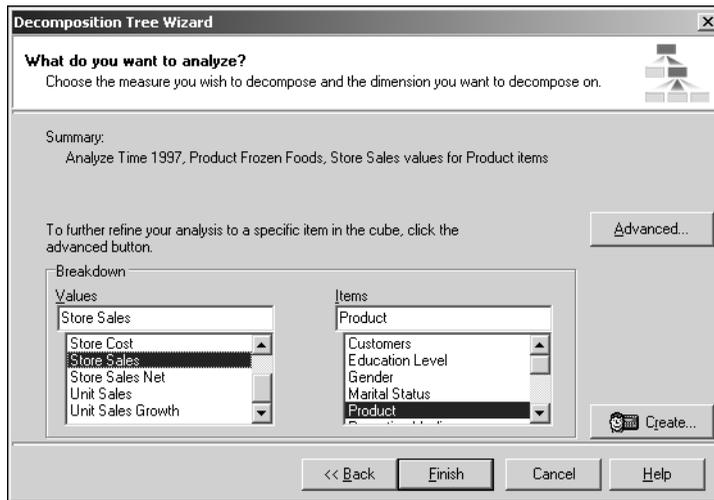


- Click the arrow beside the **View** button, point to **Advanced Analysis Tools**, then select **Decomposition Tree**.

OR

- From the **View** menu, point to **Advanced Analysis Tools**, then select **Decomposition Tree**.

2. Click **Next** on the **Welcome** screen to display the Decomposition Tree Wizard screen.



The Decomposition Tree Wizard screen

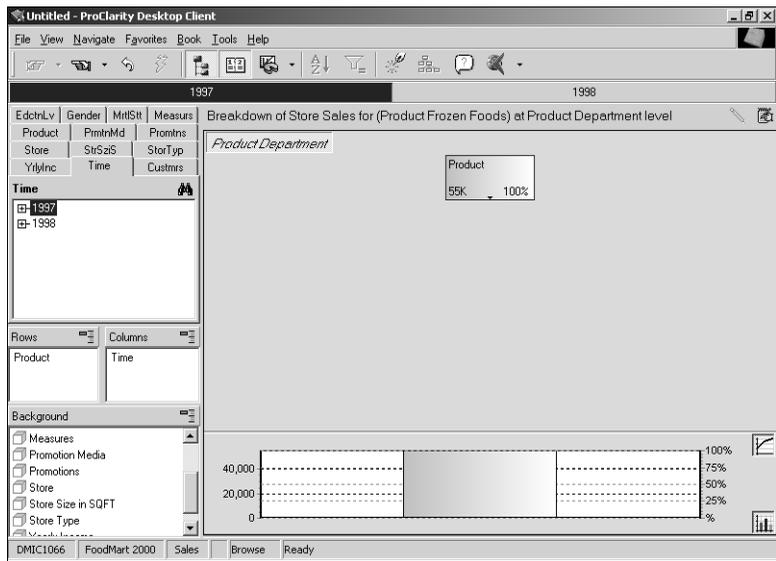
3. Select the measure you want to decompose in the **Values** box. If the measure you need is not listed, click the **Create** button to create one.

4. Select the dimension you want to decompose in the **Items** box. This defines the top (beginning) node of the Decomposition Tree.

Note

If you want to select a particular dimension member or items from multiple dimensions, click the **Advanced** button to open the **Grouping Items Editor**.

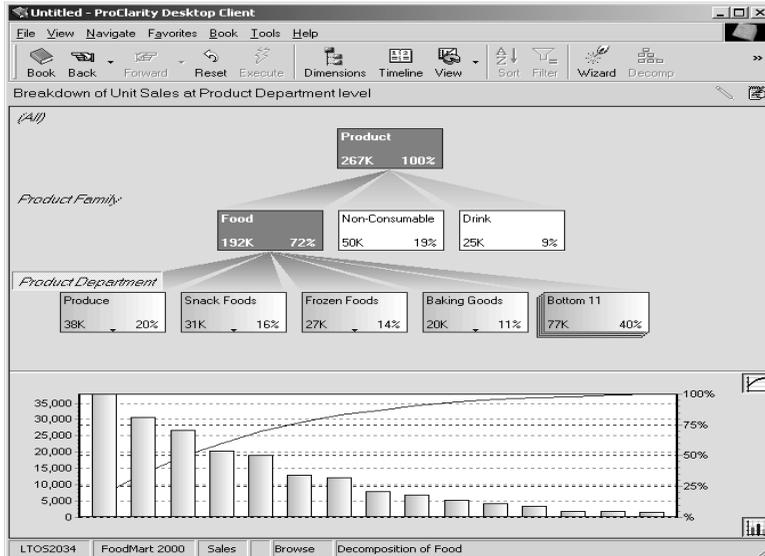
5. Click **Finish** to display the Decomposition Tree for the measures and dimensions you selected.



A Decomposition Tree view

Working with the Decomposition Tree

- To expand the tree to display components of a displayed dimension (drill down), click the dimension member. In the following expanded Decomposition View, (All) Product and Food have been expanded.



Decomposition Tree expanded to show Food items

- To expand a new member down to the same level as a currently expanded member, hold down the **Ctrl** key when you click the new member.
- To drill down on a different dimension, right-click a node, point to **Drill Down**, point to a dimension, then select an item.
- The current level is highlighted (Product Department). The bars of the pareto chart correspond to the current level. To change the current level, click a level name (for example, Product Family).
- To see how a percentage relates to the group and to the topmost total, point to the percentage.
- To collapse the tree, click the dimension member you want to collapse. The levels below the member are cleared from the view.
- Nodes labelled “Top” or “Bottom” contain members that the screen does not have room to display, and summarizes the values of those members. To display a set of the members, click the **Top** or **Bottom** node.
- You can insert a level from a new dimension anywhere in the tree. The levels above and below the insertion remain expanded and selected as they were, and the numerical information adjusts to the change. On the left side

For more information about Drill to Detail, see page 39.

of the tree, right-click on a level label, point to **Insert level**, then select the dimension level you want to insert. To remove a level, right-click on a level label, and select **Remove level**.

- To obtain a list of individual records contributing to a node value, right-click on the node, point to **Drill Down**, and click **Drill To Detail**.
- To start a new tree from an item, right-click on the item, then select **Start new tree**. A new tree opens on the screen with the starting item at the top.

Working with the pareto chart



pareto chart button



percent-of-total line button

- The pareto bars represent the items on the current level, including items contained in the Top or Bottom summary nodes. Clicking on a pareto bar will display the corresponding member from a summary node.
- To toggle hiding/displaying the pareto chart, click the **pareto chart** button.
- To toggle hiding/displaying the percent-of-total line on the pareto chart, click the **percent-of-total** line button.
- To toggle hiding/displaying grid lines in the pareto chart, click the mouse near the left or right axis to hide or display gridlines representing values, percentages, or both.

Customizing a Decomposition Tree

For more information about customizing a Decomposition Tree, see ProClarity Desktop Client Online Help.

You can customize many properties of a Decomposition Tree and pareto chart. A few examples are colors for nodes and their connectors, the color of a selected item, the size of node boxes, numeric formatting, and node text formatting.

1. Right-click on the background of a Decomposition Tree and select **Properties** to display the **Decomposition Tree Viewing Properties** box.
2. Select the area of the Decomposition Tree you want to customize and the properties for the area.
3. When you are finished making selections, click **OK**.

Using the Perspective tool

The Perspective tool provides a way for you to analyze and compare the relationship between two sets of measures for a particular dimension. In contrast with most data analysis tools that can work only with limited quantities of data, Perspective enables analysis of large volumes of data. Through Perspective views, you can gain perspective over thousands of

points of data and see the relationships those data points have with each other. If you are performing quadrant analysis, plotting high volumes of data, or wish to map multiple measures simultaneously across a dimension, Perspectives views can provide insight into the information you seek.

A Perspective view can help you answer such questions as:

- Who are my most profitable customers? (What is revenue versus profitability?)
- How did forecasted revenues compare with actual revenue?
- How do budgeted figures compare with actual numbers?

Creating a Perspective view

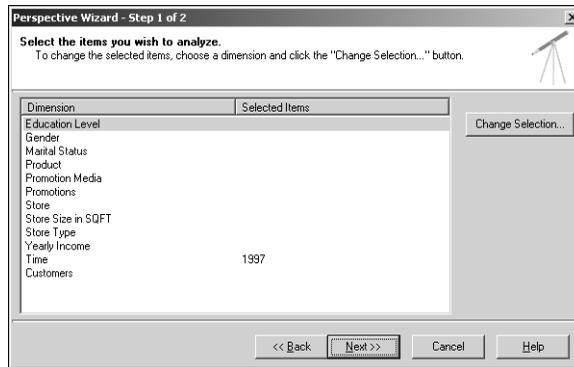
1. From the **View** menu, point to **Advanced Analysis Tools**, then select **Perspective**.

OR



View
button

Click the arrow beside the **View** button, point to **Advanced Analysis Tools**, then select **Perspective**.



Perspective Wizard step 1

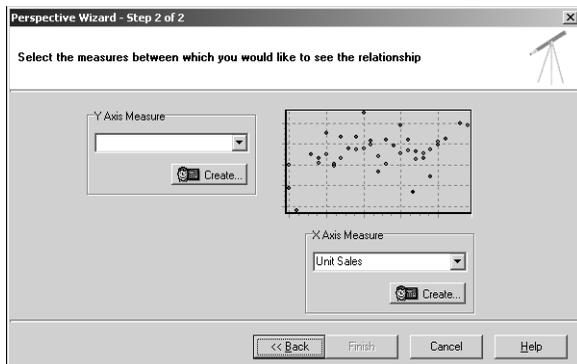
2. To change items selected for a dimension, click the dimension, then click the **Change Selection** button to open the **Change Selections** box.

If you do not select an item for a dimension, the dimension is rolled up to its highest level (the level that includes all members), and the dimension is not displayed in the Perspective view.

- When you are finished making selections, click **Next** to proceed to the next wizard screen.

Tip

To find a dimension member, click  in the **Change Selections** box. For more information, see "Finding dimension members" on page 27.



Perspective Wizard step 2

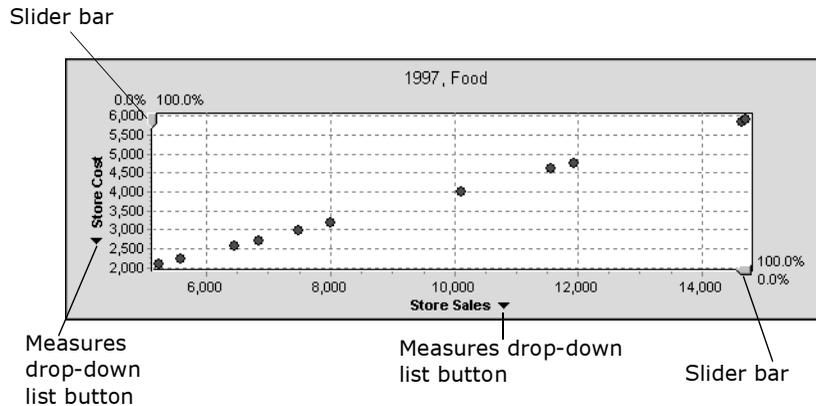
- Select the measures that you would like to see a relationship between (for example, Store Cost and Store Sales) from the drop-down menus for the Y Axis and the X Axis Measures.

A **Create** button for each axis allows you to open the Calculated Measure wizard, which guides you through the process for creating calculated measures.

- Click **Finish** to display the data in a Perspective view.

Working with a Perspective view

After you have generated a Perspective view for a particular data set, you can manipulate the image to make the information more useful. The following describes various features you can use to change the view.



A Perspective view

- To enlarge the text and images in the view, use the **Zoom** feature.
 - Zoom in: Position the cursor above-left of the data area you want to enlarge. Click and hold the left mouse button and drag downward to the right, then release the mouse button. Select **Zoom**.
 - Zoom out: Position the cursor below-right of the data area. Click and hold the left mouse button and drag upward to the left, then release the mouse button. You can also right-click on the enlarged area and click **Zoom Out**.
- To move objects around on the screen, use the **Panning** feature. Position the cursor in the area. Hold down the **Shift** key, click and hold the left mouse button, and drag the mouse.
- To see information about what a data point represents, point to it.
- To change the position of the slider bar (to create a reference line) on the X and Y axes, click and hold a slider bar arrow, then drag it with the mouse.
- To change the type of data indicated by the slider bar, right-click on the view. Point to **Statistical Sliders** and point to either **Horizontal** or **Vertical** to indicate either raw or percentage data for either sums or counts.

- To change the measures displayed on an axis, right-click on the view and select **Configure Axes**. Use the **Configure Axes** box to specify the measures. Or, right-click on the down arrow next to the axis label, and select a new measure from the list.
- To change the measures displayed on an axis, do **either** of the following:
 - Right-click on the view and select **Configure Axes**. Use the **Configure Axes** box to specify the measures.
 - Click on the down arrow next to the axis label, and select a new measure from the drop-down list.
- To start a Decomposition tree from a displayed data point, right-click on the data point, point to **Actions**, and select **Analyze**.
- To obtain a list of individual records contributing to a data point, right-click on the data point and select **Drill To Detail**.

For more information about Drill to Detail, see page 39.

For more information about customizing a Perspective view, see ProClarity Desktop Client Online Help.

Customizing a Perspective view

You can customize Perspective properties, such as background color and data point size. You can also set custom attributes for the shape and color of data points.

Changing properties

1. Right-click on the background of the Perspective view and select **Properties** to display the **Perspective Property Configuration** box.
2. Select the area you want to customize, then specify the properties for the area.
3. When you are finished making changes, click **OK**.

Changing data point attributes

1. Right-click on the background of the Perspective view and select **Data Point Attributes** to display the **Data Point Attributes** box.
2. Make selections in this box to change the attributes of any dimension's data points so they can be distinguished in the Perspective view.
3. When you are finished making changes, click **OK**.

Using the Internet Explorer view

You can display a Web page in a view.

1. From the **View** menu, point to **Advanced Analysis Tools**, then select **Internet Explorer**.

OR



View
button

Click the down arrow beside the **View** button, point to **Advanced Analysis Tools**, then select **Internet Explorer**.

2. In the **Internet Explorer Address** box, enter the URL for the Web page you want to display.
3. Click **OK**.

Chapter 6: Saving and Sharing Views

After you have used ProClarity Desktop Client to analyze your data, you may want to save your analyses for personal use or for sharing information with others. The methods you use to save and share views depend on the purposes you have in mind. This chapter describes the following methods that are based on the purposes each method serves:

- **Personal Use/Monitoring:** You can save views for your own personal use with the following:
 - Favorites
 - My Views (explained in Chapter 7)
 - Briefing books
 - Export to Outlook®
 - Printed views and briefing books
- **Communicating:** This enables you to send views to a small number of people. The views can provide analysis capabilities to readers who have ProClarity components installed. You can communicate views with the following:
 - E-mail
- **Presenting:** You can save views to use in reports or presentations with the following:
 - Export to Excel
 - Export PowerPoint®

Chapter 7 describes the following:

- **Online Publishing:** Publishing enables you to deploy views to many people at once. Published views can provide analysis capabilities to readers or be “static” read-only views. The following are methods of online publishing:
 - ProClarity Server
 - Active Books
 - Export to Web Part

Personal Use/Monitoring

You can save favorites and briefing books for future access. And you can save a view that displays in Outlook so that you can monitor changes that occur in the data.

Favorites

A favorite is a view that you save on your personal computer for future reference. You can save a favorite as your home page.

Displaying the favorites list



Favorites
button

The Favorites list provides access to all saved favorites, and provides buttons for adding and organizing favorites.

To display the list, do one of the following:

- From the toolbar, click the **Favorites** button.

OR

- From the **Favorites** menu, select **Show Favorites**.

When you select a favorite from the list, the view appears on your screen.

To close the list, click the “X” in the upper-right corner of the list.

Tip

You can also access a favorite directly from the **Favorites** menu by selecting one of the favorites listed on the bottom portion of the menu.

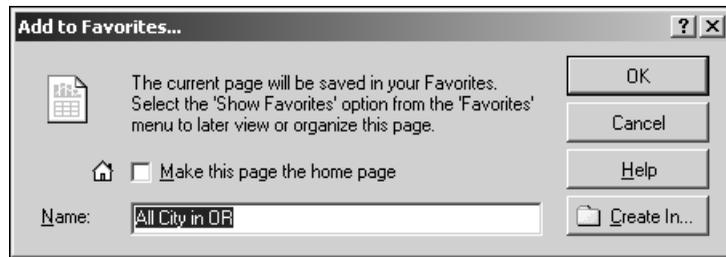
Saving the current view as a favorite

1. With a view displayed on the screen, do one of the following:

- In the **Favorites** list, click the **Add** button.

OR

- From the **Favorites** menu, select **Add to Favorites**. The **Add to Favorites** box appears.



Add to Favorites box

2. In the **Add to Favorites** box, type a name for the displayed view or use the default name provided.

- To specify a folder in which to save the view, click the **Create In** button. To create a new folder, click the **New Folder** button on the **Create In** box.
- To display this view when you first open ProClarity Desktop Client, select the **Make this page the home page** option.

3. Click **OK**.

Organizing and changing favorites

Use the **Organize Favorites** box to copy, move, rename, delete, or create folders for favorites, and designate a favorite as a home page.

1. From the **Favorites** menu, select **Organize Favorites**.

OR

On the **Favorites** list, click the **Organize** button.

2. In the **Organize Favorites** box, click on a favorite to select it.

3. Click the appropriate button to delete, copy, move, rename or create a new folder. You can also designate a favorite as the home page by clicking on the **Home Page** option.

4. Click **Close**.

Briefing books

Briefing books are compilations of views (pages) that can be organized into folders.

You can save a briefing book to your personal computer for your own use. Usually, however, you will share briefing books with others. You can e-mail them, export them (to Outlook, PowerPoint, or as a Web Part to be used in a digital dashboard), and publish them (as an Active Book or to ProClarity Server).

This section describes how to create briefing books and save them to your computer. Later sections and the following chapter describe how to use them to share information with others.

The current briefing book

The current briefing book is the one you have open in your application. Only one briefing book can be open at a time.

- To open a book published to ProClarity Server, from the **File** menu, point to **ProClarity Server**, then select **Retrieve Book**.
- To open a book not published to ProClarity Server, from the **File** menu, select **Open Book**.
- If you have a briefing book open and want to start a new one, from the **File** menu, select **New Book**. An empty, untitled book becomes the current book.
- If you connect to a cube without opening an existing briefing book, an empty, untitled book becomes the current book.

Publishing is explained in Chapter 7.

Displaying a list of current briefing book pages

A list of pages in the current briefing book automatically displays when you open the book, add pages to it, or organize it.

To close the list, click the “X” in the upper-right corner of the list.

To reopen the list, do one of the following:

- From the **Book** menu, select **Show Book**.

OR



- From the toolbar, click the **Book** button.

Creating a briefing book

1. Add pages to the current book.
2. (Optional) Select publishing properties to specify the analysis capabilities the book will provide.
3. (Optional) Configure actions for dealing with cube data changes (for example, a dimension member included in a briefing book view is deleted from the cube).
4. Name and save the briefing book.

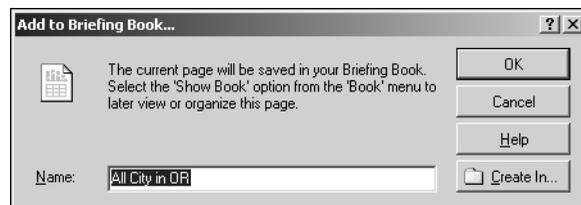
The following four sections briefly explain these steps. For more detailed explanations, see Online Help.

Add pages to the current briefing book

1. Create a view that you want to include as a page in the current briefing book.
2. From the **Briefing Book** list, click the **Add** button.

OR

From the **Book** menu, select **Add to Briefing Book**.



Add to Briefing Book box

3. In the **Add to Briefing Book** box, type a name or use the default name for the page.

To specify a folder in which to save the view, click the **Create In** button. To create a new folder, click the **New Folder** button on the **Create In** box.

4. Click **OK**.

Tip

To add views from a local cube to a briefing book, from the **File** menu, select **Options**. On the **Other** tab, select **OK to use Local Cube Files in a Briefing Book**. Other users of the briefing book will need access to the local cube.

Select publishing properties (optional)

When you create a briefing book, you can set publishing properties to control the analysis features that are available when a briefing book is viewed within an application other than ProClarity Desktop Client (for example, in the Rich Client or in a PowerPoint presentation). A briefing book viewed in ProClarity Desktop Client includes full analysis capabilities, regardless of any publishing options that have been set.

You can set separate properties for each page and folder, plus overall properties for the book. Page properties apply to a single page, Folder properties apply to all pages within a folder, and Book properties apply to all pages within a book.

For an explanation of individual publishing properties, see ProClarity Desktop Client Online Help.

By default, all properties are selected. When you use a **Publishing Properties** box, you clear options that you do not want to include. Some options encompasses a set of properties. For example, Navigate Foreground includes the MDX Editor, English Query, and New Tree (for a Decomposition Tree).

To open a **Publishing Properties** box, do the following:

1. In the Briefing Book list, right-click on a page or folder.
2. Select the appropriate command for the kind of publishing properties (such as **Page**, **Folder**, or **Book**) you want to set.
3. In the **Publishing Properties** box, clear options for properties that you do not want to include, and leave ones selected that you do want to include.

4. When you are finished selecting, click **OK**.

Notes

- Book properties override Folder properties, and Folder properties override Page properties. For example, if you select the Drill to Detail for a folder, all of the pages in the folder will provide the drill to detail capability, even if you do not select it for each page in the folder.
 - If you set publishing properties for a saved book, be sure to resave the book.
 - If the Publishing Properties menu commands are not available, your application does not support them.
 - Properties you set become the default properties if you publish the book to ProClarity Server. You can refine properties when you publish (see “Setting publishing properties” on page 92).
-

Configure the book to deal with cube changes (optional)

While creating a briefing book, you can specify actions to be taken if the cube data changes—for example, if a dimension member is renamed, moved, or deleted—which causes the briefing book to contain missing items.

1. To display the **Briefing Book Configuration** box, from the **Book** menu, select **Configuration**.
2. Double-click an item listed under **Type** to specify the action to be taken if an item of this Type becomes missing in the briefing book.
3. Click **OK**, then double-click another **Type**.
4. Repeat steps 3-4 until an action for each Type has been specified. If you do not specify an action, the default action will be **Prompt user**.

Notes

- The **Check Against Cube** and **See all renamed items** options are administrative functions. For an explanation, see ProClarity Desktop Client Online Help.
 - If you open a briefing book and it contains blank pages or some missing data, the reason may be that the author configured it to disable pages or drop items in the event of cube data changes. If a prompt appears to resolve the missing items, select an option. Click the **Help** button on the dialog box to obtain an explanation of the options.
-

Name and save the book

1. From the **File** menu, select **Save Book As** to display the **Save ProClarity Briefing Book** box.
2. In the field for specifying a file type, select one of the following:
 - Briefing Books (*.kb3): results in one .kb3 file.
 - XML Briefing Books (*.xml): results in an XML file for each briefing book page, plus two more XML files: the book file (<book name>.xml) and the metadata file (<book name>_MDStore.xml).
3. Specify where to save the files, or accept the defaults.
4. Select the option for saving the file.
The book's name appears in the title bar.

Organizing and changing briefing book pages

The **Organize** box allows you to copy, move, rename, delete, and create folders for briefing book pages.

1. To display the **Organize** box, do one of the following:
 - From the **Book** menu, select **Organize Briefing Book**.

OR

 - From the Briefing Book list, click the **Organize** button.
2. In the **Organize** box, click the view you want to organize, copy, or change.
3. Click one of the organization buttons (for example, **Move** or **Copy**).
4. When you are finished organizing, click **Close**.

Tips

- You can drag pages into folders with the mouse. To create a folder, click **New Folder**.
 - To retain the organization, resave the book before opening a different book.
-

Editing a briefing book page



Page Edit
button

1. Open the briefing book page that you want to edit.
2. Click the **Page Edit** button. The briefing book page is in edit mode.
3. Edit the page.
4. When you have completed editing the page, click the **Page Edit** button again.

Deleting a briefing book

To delete an entire briefing book, use Windows Explorer to locate the .kb3 file and delete it or to locate the appropriate .xml files and delete them.

Version 2.0 and version 3.0 books

ProClarity Desktop Client version 3.0 briefing books are compatible with version 4.0. To use version 2.0 books with version 4.0, please contact Technical Support.

Export to Outlook

The Export to Outlook feature makes the current briefing book usable from within Microsoft Outlook. As cube data changes, the Outlook views reflect the changes. You must have Outlook 2000 or newer to use this feature.

To export the current briefing book, do the following:

- From the **File** menu, point to **Export**, then select **Export to Outlook**.
A wizard displays to guide you through the rest of the export process.

The export process creates an .htm file and a .kb3 file, plus a link to the book in the Outlook Folder List. When the export is finished, Outlook will open, and you can display the book from the Folder List.

Notes

- Any options set for controlling interactivity will apply while viewing the book in Outlook.
 - You cannot save any modifications you make to the views while in Outlook.
 - If you export a briefing book, then modify its pages without changing the structure (without adding or deleting pages and folders), you only need to save the changes in the briefing book. You will not need to re-export the book to Outlook. However, if you add or delete pages in the source book, you will need to re-export it to Outlook.
-

Sharing a book exported to Outlook

Because each computer has its own unique Outlook environment, the exported files will work only on the computer on which the export feature is run. If you would like to place a briefing book in someone else's Outlook environment, e-mail the briefing book and have the recipient run the export feature on his or her machine.

Deleting a book exported to Outlook

Delete all of the following:

- The .htm and .kb3 files
- The link in the Outlook Folder List

Printed views and briefing books

You can print a single view or the current briefing book.

1. With a view displayed on your screen, select **Print** from the **File** menu to open the **Print** dialog box.
2. Select whether to print the currently displayed view or the entire briefing book.
3. Set the number of copies to print.
4. To customize the appearance of the printed pages, click **Page Setup** and complete the Page Setup options.
5. Click **Print**.

Communicating

You can share views with others by using a common communication method: e-mail. The views can provide analysis capabilities to readers who have ProClarity components installed.

E-mail a briefing book

1. Have the briefing book open that you want to e-mail.
2. From the **File** menu, select **Send**.
The e-mail service opens with the briefing book attached.
3. Fill out the address information and send the e-mail.

Presenting

You can export views to use in Excel reports or PowerPoint presentations.

Export to Excel

The Export to Excel feature opens the Microsoft Excel application and fills in the spreadsheet cells with the data from the current view. You must have Excel 2000 or newer to use this feature.

1. Display a view that you want to export data from.
2. From the **Tools** menu, point to **Export**, then select **Export to Excel**.

A warning appears explaining that the contents of your Clipboard will be erased. If you click **OK**, the Excel application opens and data from the view is placed within the cells of a spreadsheet.

Sharing a view exported to Excel

You can do either or both of the following:

- E-mail the worksheet.
- Save the worksheet to a server.

Deleting a view exported to Excel

To delete the output of an Export to Excel procedure, delete the Excel (.xls) file.

ProClarity components are installed for those who use any of the following: Desktop Client, Rich Client, Active Books, and some custom applications.

Export to PowerPoint

The Export to PowerPoint feature exports the current briefing book to a Microsoft PowerPoint presentation. The slides can provide analysis capabilities to readers who have ProClarity components installed. You must have PowerPoint 2000 or newer to use this feature.

To export the current briefing book, do the following:

- From the **File** menu, point to **Export**, then select **Export to PowerPoint**.

A wizard displays to guide you through the rest of the export process.

When you click **Finish** on the last step of the Wizard, a progress bar displays while a slide presentation is created. The export process creates the following:

- Interactivity included: The PowerPoint presentation (.ppt file) and an active briefing book (.ppt.kb3 file)
- No interactivity included: A PowerPoint presentation (.ppt file)

When the export is complete, PowerPoint opens in design mode. The presentation contains a slide of the current view, or a slide for each briefing book page, and one introduction slide.

Sharing a book exported to PowerPoint

You can do either or both of the following:

- E-mail the output files.
- Save these files to a server.

Deleting a book exported to PowerPoint

Delete the .ppt and (for interactive books) the .ppt.kb3 files.

Chapter 7: Online Publishing

For other methods of sharing views, see Chapter 6.

Online publishing is a method of sharing views that enables you to distribute briefing books to many people at once. This broad distribution is possible because readers have Web access to published books. When you publish, you can decide whether the books will provide analysis capabilities to readers or be “static” read-only views.

This chapter explains the following online publishing methods:

- ProClarity Server
- Active Books
- Export to Web Part

ProClarity Server

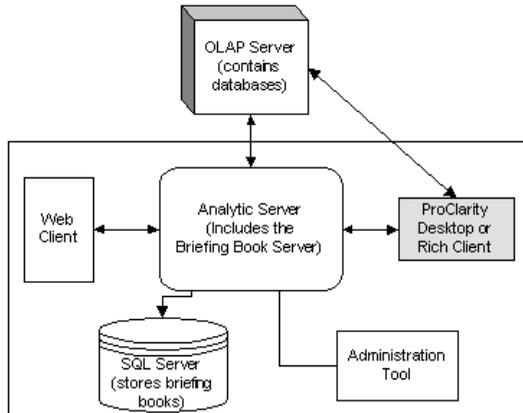
ProClarity Enterprise Server (ProClarity Server) is a data analysis package that includes ProClarity Desktop Client. ProClarity Server allows controlled Web access to briefing books while providing the following benefits to authors:

- A centralized location for storing and updating briefing books. Authors can publish books to ProClarity Server and retrieve them from the server to edit them. This ensures that each reader uses the same version of a book.
- A centralized location for distributing the briefing books. Authors can specify access rights for the books they publish. And authors do not need to be concerned about software requirements because readers need only a Web browser to use the books.

ProClarity Server also benefits the readers of published briefing books. Using a Web browser, authorized readers can open published briefing books and use the data analysis features that are included with them—without having to download any software.

ProClarity Server components

The following is an illustration of ProClarity Server components. Following the illustration is an explanation of how the components help you publish and use briefing books.



ProClarity Enterprise Server (ProClarity Server)

When you publish a briefing book using the **Desktop Client** or **Rich Client**, you can set publishing properties to define the analysis features that are included with the book. You can also apply roles to control user access to the books. An Administrator using the **Administration Tool** defines the roles, which are composed of members with assigned permissions.

Once published, the briefing book is stored in **SQL Server**.

To retrieve a briefing book stored in **SQL Server**, a Desktop Client, Rich Client, or Web Client user logs into the **Analytic Server**. When a request comes to the Analytic Server to retrieve a book, the **Briefing Book Server** component of the Analytic Server gets the book from **SQL Server**, enforces the security settings, and deploys the book to the user.

Each time the user opens a page from the book or uses an analysis feature (such as drill down or the Dimensions tool), a query is sent to the **OLAP Server** database. For Web Client users, the query is communicated through the Analytic Server to the **OLAP Server**, which processes the result and sends it back for display in the Web browser. For Desktop and Rich Client users, the query goes directly to the **OLAP Server**, which processes the result and sends it back for display in the application.

The following sections explain how to publish and manage books on ProClarity Server:

- Showing the ProClarity Server publishing menu
- Publishing to ProClarity Server
- Retrieving a published briefing book
- Editing a published briefing book
- Managing published books
- Managing roles
- Publishing views to My Views

Showing the ProClarity Server publishing menu



ProClarity Server button

The arrow beside the **ProClarity Server** button displays a publishing menu. If the publishing menu has not been enabled, it offers only two options: **Retrieve Book** and **Retrieve My View**. Once enabled, the publishing menu offers the following additional options: **Publish**, **Publish As**, and **Manage Books**.

1. From the **Help** menu, select **About ProClarity Server**.
2. In the **About** box, select the **Show Publishing Menu** check box.

Publishing to ProClarity Server

When you use the options of the Proclarity Server button, you are using the "Authoring Tool."

Once you have created a briefing book in ProClarity Desktop Client (see "Creating a briefing book" on page 77), you can publish it to a library on ProClarity Server.

1. Click the down arrow beside the **ProClarity Server** button and select **Publish Book**.

OR

From the **File** menu, point to **ProClarity Server** and select **Publish Book**.

2. In the Publish Book screen, click on a library.
To change servers, click the **Change Server** button.



Change Server button

3. In the **Book name** and **Description** data fields, enter the appropriate information.

4. Click the **Publish** button.

The current briefing book is published to ProClarity Server in the library you selected.

Notes

- If the Publish button is dimmed, you may not have author access rights. See your system administrator.
- The book is published with this icon  to indicate that it is being edited. To close editing, open a different book or log off.



ProClarity
Server
button

Retrieving a published briefing book

1. Click the down arrow beside the **ProClarity Server** button and select **Retrieve Book**.



Library
icon

2. In the Libraries pane of the **Retrieve Book** screen, select a library to display its contents.

To select a library from a different server, click the **Change Server** button.



Change
Server button

3. In the Content pane, select a book.

4. (Optional) If you intend to edit the book, select **Lock for editing**.

5. Click **OK**.

Editing a published briefing book

If you have author access rights, you can edit books that have been published to ProClarity Server.

1. Retrieve a ProClarity Server briefing book, making sure to select **Lock for editing** on the **Retrieve Book** screen.

Locking a book prevents multiple authors from making changes to a briefing book simultaneously.

2. Edit the book by doing any of the following:

- Add pages (see page 77).
- Edit pages (see page 81).
- Reorganize the book: includes deleting and renaming pages (see page 80).



ProClarity Server button To replace the previous version of the book with your edited version, click the down arrow beside the **ProClarity Server** button and select **Publish Book**.

Notes

- When you lock a book for editing, the Retrieve Book screen shows this icon  to indicate that it is currently being edited (is currently “locked”). To close your editing session, open a different book or log off.
- If the locked icon is beside a book, you can still open the book in read-only mode (without selecting **Lock for editing**).

Managing published books

The Authoring Tool **Manage Books** screen enables you to perform tasks such as creating new libraries and organizing books. To use the **Manage Books** screen, do the following:

1. Click the down arrow beside the **ProClarity Server** button.



ProClarity Server button

2. Select **Manage Books**.

3. Select an item from the left-hand pane, such as a library, book, or page.

4. Click one of the buttons to perform the appropriate task (see the following table).

For more information about managing books, click the **Help** button on the **Manage Books** screen to open the ProClarity Authoring Tool Online Help.

5. To leave the Manage Books screen, click **Close**.

Button	Task
	Toggle among the following display options: Large Icons, Small Icons, List, and Details
	Manage roles (see page 90)
	View and modify properties (see “Setting publishing properties” on page 92)
	Delete an item (excluding the server)
	Copy an item
	Move an item
	Create a new library

Managing roles

Only an Administrator can create roles and grant author privileges.

After you have published to ProClarity server, you can grant reader access rights (reader privileges) to selected roles to make published books visible to the members of those roles. Additionally, you can enable publishing properties to define the analysis capabilities books will provide to readers.

Readers can do the following with the items their roles have been associated with:

- open and view the contents of libraries
- retrieve (open) briefing books stored on the Briefing Book Server
- save briefing book views to My Views (a personal repository on the Briefing Book Server)
- perform data analysis as provided by the publishing properties set for the briefing book

Granting reader access rights to roles



ProClarity
Server
button

1. Click the down arrow next to the **ProClarity Server** button and select **Manage Books**.
2. In the **Manage Books** screen, select the server, library, or book that you want to grant reader access rights to.



Manage
Roles button

3. Click the **Manage Roles** button.
The Manage Roles screen lists all ProClarity Server roles. The screen's caption displays the name of the selected item (server, library, or book) with which the roles can be associated.



The key icon represents the Administrator role. Members of this role are granted all permissions: access rights and publishing properties.



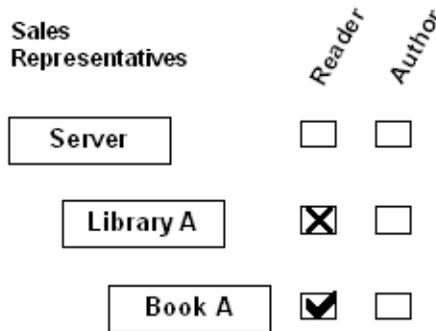
The pencil icon indicates Author privileges, which automatically include Reader privileges

You can grant reader access at one level (such as the library level) and then edit later to grant or deny access to specific items (such as individual books) contained in that level. For more information about editing roles, click the **Help** button on the **Manage Roles** screen to open the ProClarity Authoring Tool Online Help.

4. Click in the check boxes to either grant or deny access or leave the access right unspecified.
5. Click **Apply** to update the settings on the Server.
6. Click **OK** to close the screen.

Important As you grant or deny access rights, you should be aware that your settings can be overridden by explicit settings at lower levels. For example, access rights that are explicitly denied at the library level can be overridden if they are explicitly granted at the book level.

The following diagram provides an example.



Access rights example

The settings in the **Access rights example** diagram allow members of the Sales Representatives role to view Book A, even though they have been denied access to the library in which it is contained. In this scenario, a member of the role would have been given the book's specific location (or URL) in a linked document, a Web Part, or an e-mail message.

Setting publishing properties

When you create briefing books in the Desktop Client, you can set publishing properties to determine the interactive capabilities the book will provide (see "Select publishing properties" on page 78). These become the default properties when you publish the book to ProClarity Server. Using the ProClarity Server Authoring Tool Properties screen, you can refine these properties for the roles that have reader access to the book. You can set publishing properties at the category level, or you can set individual publishing properties.

To set **categories** of publishing properties, do the following:



ProClarity Server button

1. Click the down arrow next to the **ProClarity Server** button and select **Manage Books**.

2. In the **Manage Books** screen, select the level (server, library, or book) at which you want to set properties.



Manage Roles button

3. Click the **Manage Roles** button.

Properties
button

4. In the **Manage Roles** screen, select a role, then click the **Properties** button.
5. In the Properties screen, click the **Publishing** tab.
The tab displays categories of publishing properties. Individual additional properties can be accessed with the **Details** button.
6. Click in the check boxes to select or clear individual items.
7. Click **Apply** to update the settings on the Server.
8. Click **OK** to apply your choices and return to the **Manage Roles** screen.

For more information about publishing properties, click the **Help** button on the **Manage Roles** screen to open the ProClarity Authoring Tool Online Help.

To select **individual publishing properties**, do the following:

1. Click on a category name and click **Details**.
2. Place checkmarks in the boxes to indicate your choices.
3. Click **OK** to apply your choices, or click **Cancel** to return to the **Publishing Properties** screen.



If you have selected individual publishing properties, an icon with a checkmark and an X appears in the category's check box.

Publishing views to My Views

My Views is a briefing book on ProClarity Server that is accessible only to you. My Views is similar to the Desktop Client favorites.

ProClarity
Server
button

1. Click the arrow beside the **ProClarity Server** button and select **Retrieve My Views**.
2. Add the current view to the My Views briefing book.
(See “Add pages to the current briefing book” on page 77.)

Note

If a view you want to save to My Views comes from another briefing book, see the procedure in the Desktop Client Online Help for adding a view to My Views.

Active Books

If you do not have ProClarity Server, Active Books are an alternative for providing Web access to briefing books. An Active Book is a single view or a complete briefing book that you save in HTML format.

Note

Active Book publishing is not available from the Rich Client.

When a reader opens an interactive Active Book, the ProClarity components needed to use the book's interactive features will download to the reader's computer. When a reader opens a read-only Active Book, the book will run in a Web browser only and no ProClarity components will download. To create an interactive Active Book, you must have an Active Book deployment license key.

The following sections explain how to create and use Active Books:

- Creating an Active Book
- Sharing an Active Book
- About licensing
- Reading an Active Book
- Deleting an Active Book

For more detailed information about the purpose and use of Active Books, refer to ProClarity Desktop Client Online Help or the Administrator's Guide (AdminInstall.txt). Topics include discussions about using HTML tags, formatting issues associated with file types and frames, and editing (customizing) Active Books.

Creating an Active Book

Active Books are created using the Active Book Wizard.

1. Display a view or open the briefing book you want to use to create an Active Book.
2. For a briefing book, be sure any publishing properties you want to include are set (see "Select publishing properties" on page 78).
3. From the **File** menu, point to **Active Book** and click **Publish ActiveBook**. This starts the Active Book Wizard.
4. Complete the Active Book Wizard screens.
To display specific help about any screen, click the screen's **Help** button. Characteristics you will specify include the following:

- Interactivity - You can enter a license key, then specify to add interactivity.
- Interactive attributes - These allow you to further control user interactivity (beyond the briefing book publishing properties). For example, you can hide the toolbar.
- Title page information.
- Storage and access file paths or URLs.

Sharing an Active Book

Step 4 of the Active Book Wizard allows you to specify the URL or file path used for accessing the Active Book. Readers will need to know this URL or file path to open the Active Book.

When the Active Book is initially accessed by readers who do not have ProClarity Desktop Client 4.0, the necessary files, controls, and software are downloaded for viewing the Active Book, and the Active Book is displayed through the browser.

About licensing

Each user that publishes an interactive Active Book must have an Active Book deployment license key. Each user that views an Active Book must have a current ProClarity Desktop Client license if he or she does not have a licensed copy of ProClarity Desktop Client installed.

Making ProClarity Active Books available for use on a Web browser without a specific license to do so is a violation of the license agreement. To obtain license information, contact your system administrator or your ProClarity Corporation Sales Representative.

Reading an Active Book

The following are the minimum browser requirements for reading Active Books that include interactivity:

- Internet Explorer: Internet Explorer version 5.0
- Netscape® Navigator: Netscape Navigator version 4.7 plus Internet Explorer version 5.0

Read-only Active Books may be viewed with any browser that supports frames (including Netscape Navigator version 3.0 or newer).

The procedure for opening an Active Book depends on whether you are accessing it from an intranet server or over the Internet.

Opening an Active Book on an intranet server

1. Open your Web browser.
2. From the browser **File** menu, click **Open** to open a file.
3. Browse to the server and folder in which the Active Book's default.htm file is stored.
4. Open the default.htm file.

Opening an Active Book over the Internet

You can open an Active Book over the Internet from the ProClarity Desktop Client application or from your Web browser.

From ProClarity Desktop Client

1. From the **File** menu, point to **Web**, then click **Open Active Book**.
2. In the **Open Active Book** box, type the http address and name for the Active Book. For example: http://<address>/<Active Book name>
3. Click **OK**.

From your Web browser

1. Open your Web browser.
2. In the browser address field, type the http address for the Active Book's default.htm file. For example: http://<address>/default.htm
3. Press **Enter**.

Deleting an Active Book

- On the server that stores the Active Book, delete the folder containing the Active Book files.

Export to Web Part

This feature allows a briefing book to be displayed in a Microsoft digital dashboard (version 2.01 or newer). The book is then available to anyone who accesses the Web site containing the digital dashboard.

If the exported book includes interactivity, the reader must have either ProClarity Desktop Client, Rich Client, or a custom ProClarity application installed.

The following sections explain how to use the Export to Web Part feature:

- Exporting the current briefing book to Web Part
- Sharing a Web Part
- Deleting a Web Part

Exporting the current briefing book to Web Part

To export the current briefing book, do the following:

1. From the **File** menu, point to **Export**, then select **Export to Web Part**. A wizard displays to guide you through the rest of the export process.
2. Within the Wizard, you can save the Web Part to a file, to a specific digital dashboard, or both. One or both of the following will then be generated:
 - An .htm file and some .xml files
 - A Web Part published to a digital dashboard

Sharing a Web Part

To share a Web Part, do one of the following:

- E-mail the folder containing the files generated by the export.

OR

- Within the Wizard, specify to publish the Web Part to a specific digital dashboard.

Deleting a Web Part

To delete a Web Part, do **one or both** of the following:

- Delete the .htm and .xml files.
- In the digital dashboard, click the **Content** button. Clear the check box next to the Web Part. This removes the Web Part from the digital dashboard display.

If you have administrator rights, you can remove the Web Part from the system. Double-click the Web Part name to open an editing screen. On this screen, select to delete the Web Part.

Chapter 8: Using ProClarity Desktop Client's Advanced Features

After you have mastered the basics of ProClarity Desktop Client, you may want to experiment with the more advanced features of this application. These features include wizards for creating local cubes and calculated measures; an MDX Editor that allows you to create named sets and calculated members; command-line arguments; and an integrated VBA (Visual Basic® for Applications) work environment. These tools allow you to streamline procedures and extend the functionality of your application.

How do I?

This chapter presents several methods for enhancing your performance in ProClarity Desktop Client. Some of the tasks described here can be accomplished in more than one way, in which case the most efficient alternative is described.

- Apply a meaningful name to a group of members.
- Create a custom measure or member to expedite my query.
- Develop models for budgeting and forecasting.
- Create a local cube file so that I can use ProClarity Desktop Client from a laptop.
- Pose my query in English.
- Customize the ProClarity Desktop Client startup view.
- Develop Visual Basic code from within ProClarity Desktop Client.
- Write a macro to consolidate a series of tasks.
- Create an add-in to customize my application.
- Develop a plug-in to extend functionality.

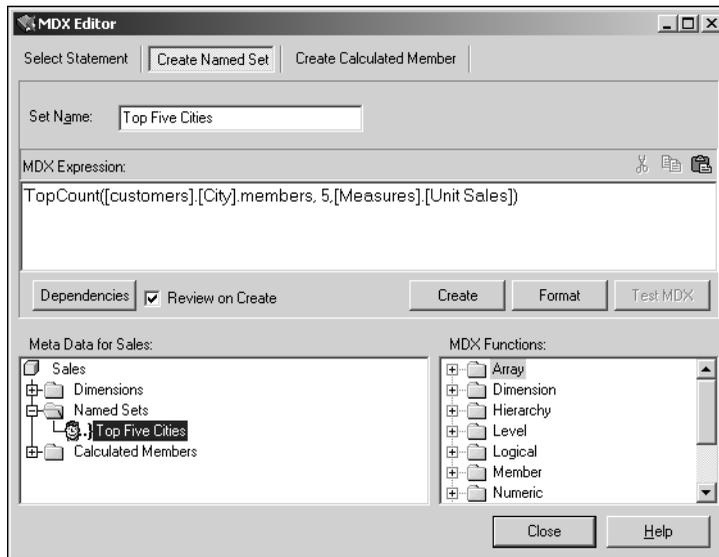
For step-by-step instructions for using the features described in this chapter, see ProClarity Desktop Client Online Help and the Developer's Guide.

Applying a meaningful name to a group of members

Data analysis is made easier and more efficient when you can group together certain members and refer to them collectively with a meaningful name. For example, you might want to create a set of members that represents the Northwest region or the first four months of a year.

Named sets establish groupings that differ from those that occur in the natural hierarchy. More importantly, named sets are dynamic; that is, the members they identify can change based on changes in data. For example, if a named set represents the Top Five Cities, the cities identified within this group would vary with changes in the data.

You can create user-defined named sets within the MDX Editor (under **View**) or from the right-click menu in the Dimensions tool. The MDX Editor offers greater flexibility in that it allows you to include members from different dimensions. The following is an example of a named set in the MDX Editor.



Creating a named set using the MDX Editor

Once you've created a named set, it appears in the Dimensions tool, where it can be easily accessed to run a query. The following example displays the result of a query containing the Top Five Cities named set.

Product	PrmtnMd	Promtns	Unit Sales (City by Year)	
Store	StrSziS	StorTyp	Measures: Unit Sales	
EdctnLv	Gender	MrtlStt	1997	
YrlyInc	Time	Custmrs		
Customers			Spokane	23,591.00
<input type="checkbox"/> All Customers <input checked="" type="checkbox"/> Top Five Cities			Olympia	12,570.00
			Port Orchard	12,399.00
			Bremerton	12,177.00
			Puyallup	11,802.00

Working with named sets in the Dimensions tool

Besides user-defined named sets, there are also server-defined and briefing book named sets. Online Help provides more information about named sets.

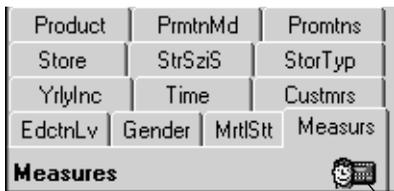
Creating a custom measure or member to expedite a query

Certain formulas, such as one that shows percentage growth for a given time period, appear repeatedly as a component of an MDX statement, or query. Rather than developing these commonly used formulas with each new query, you can create a user-defined calculated member. A calculated member combines multiple members of a dimension with arithmetic operators and MDX functions to create a new member that can be referenced by name within an MDX statement.

ProClarity Desktop Client distinguishes between calculated *measures* and calculated *members*. A calculated measure appears only within the Measures, while a calculated member can appear on any dimension. ProClarity Desktop Client provides a wizard for developing a calculated measure and the MDX Editor for building calculated members. The Calculated Measure Wizard is a good starting point because it provides predefined scenarios. For greater control and flexibility, however, you should use the MDX Editor.

Creating a calculated measure

To access the Calculated Measure Wizard, click the **Measures** tab in the Dimensions tool and then click the **Calculated Measure** button.



Calculated Measure button

The wizard asks you to select from four options:

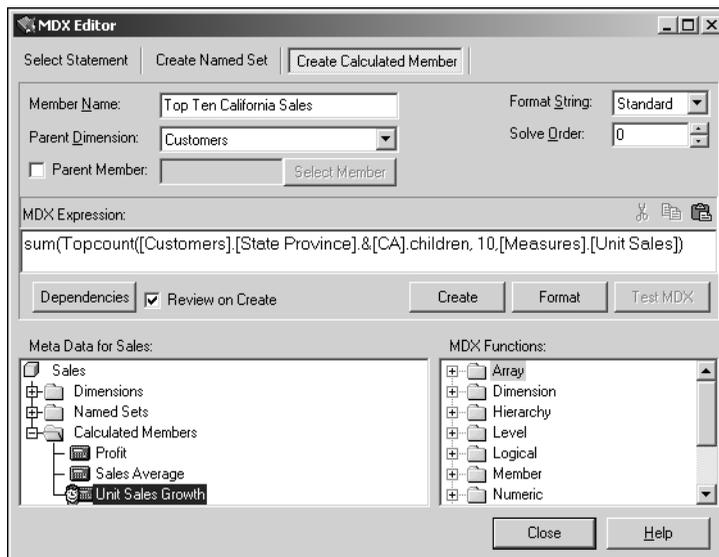
- **Growth**—This option allows you to view a percent change or an absolute change. Choose from prior year or prior quarter.
- **Time series**—These options include year-to-date, quarter-to-date, and period-to-date. You can also specify a rolling period.
- **Simple relationship**—In this screen, you can select from ratio, difference, percent of difference, or percent of markup. Additional drop-down menus allow you to create a ratio formula.
- **Custom formula**—This option presents a blank data field for constructing your own MDX expression. It includes a keypad of arithmetic operators and other symbols, as well as the ability to specify a format string.

Creating a calculated member

Use the MDX Editor (under **View**) to create a calculated member for any dimension, including the Measures dimension. The MDX Editor provides drop-down menus for selecting dimensions and members, and for setting the format string and solve order.

To build a calculated member, you insert metadata items, MDX functions, and arithmetic operators into the **MDX Expression** window. A Dependencies feature within the MDX Editor reveals previously created calculated members upon which the new expression may depend.

The following screen example shows a calculated member that generates the Top 10 Sales for California.



Using the MDX Editor to create a calculated member

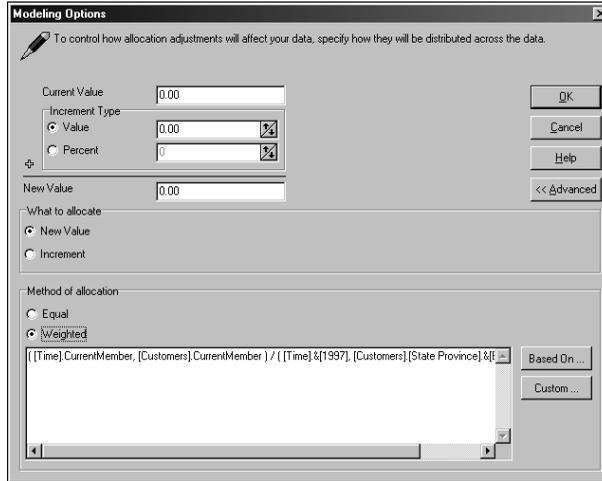
Besides user-defined calculated members, there are also server-defined and briefing book calculated members. Online Help provides more information about calculated members.

Developing models for budgeting and forecasting

Business modeling is commonly used to develop forecasts, make projections, and prepare budgets. ProClarity Desktop Client provides a Modeling tool (under **File**) that allows you to develop *What if* scenarios by changing values. To use this tool, you must be working with a write-enabled cube.

The Modeling tool would allow you to illustrate, for example, how an increase in advertising would affect the profitability of a particular product. When you change a value, data contributing to that value changes according to the allocation you specify.

For example, you can use a weighted allocation that is based on dimension members you select. The Modeling tool generates an MDX statement that reflects the method of allocation you specify. See the following example.



Changing and allocating values in the Modeling tool

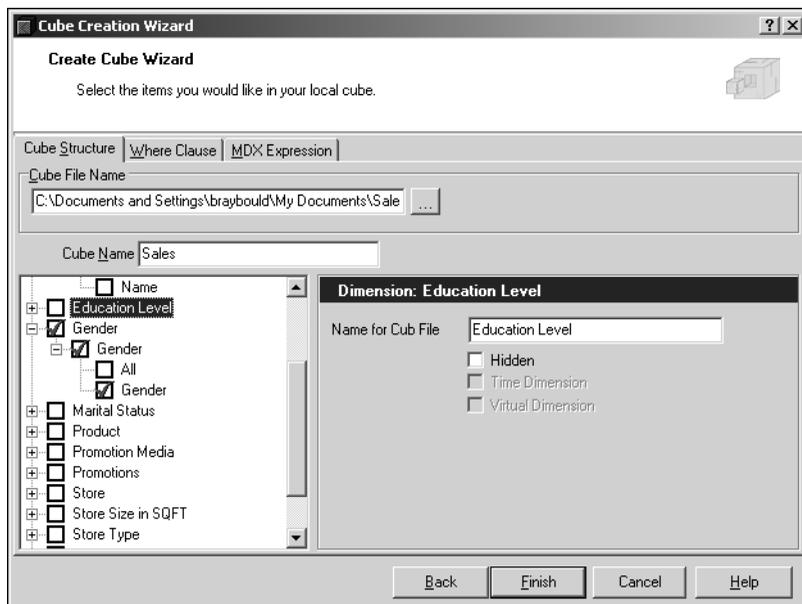
The Modeling tool is very effective when used with cubes containing a limited number of dimensions. As the number of dimensions in the cube increases, the amount of time it takes to run the query increases. See the Online Help for instructions on how to use this tool most effectively.

Creating a local cube file to use ProClarity Desktop Client from a laptop

If you're without a network connection (perhaps using a laptop), you can use ProClarity Desktop Client to browse a local cube file instead of a cube. A local cube file can contain part or all of the original cube, stored in a single, portable file. To use a local cube file, you must have Microsoft OLE DB Provider for OLAP Services installed on your computer.

ProClarity Desktop Client provides a wizard to help you create a local cube file from a currently open cube. To access the wizard, select **Create a local cube** from the **File** menu. Three tabs in the wizard allow you to configure the cube's structure, specify a Where clause, and edit the MDX expression that defines the local cube.

The cube's structure is determined by the measures, dimensions, hierarchies, and levels you select and is displayed in the local cube's Dimensions tool. The **Where Clause** tab lists the items in the current cube that will contribute data to the local cube. The following is an example of how a cube's structure is configured.

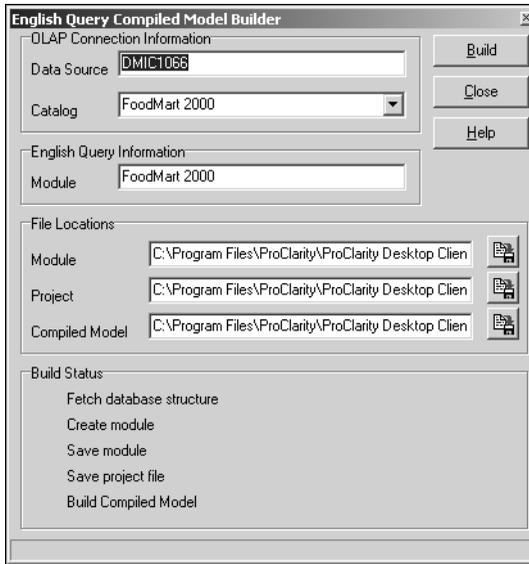


Using the Create Cube Wizard

Posing a query in English

An English Query tool (under **View**) is available in ProClarity Desktop Client that allows you to enter a query in plain English rather than develop an MDX statement. To use the English Query, you must install English Query from the Microsoft SQL Server Version 8 (or newer) setup disk.

The English Query tool relies on a Compiled Model, a set of files that contain information about the structure and contents of an existing cube. You can build a Compiled Model within ProClarity Desktop Client, as shown below.



Building a Compiled Model for the English Query feature

Customizing the ProClarity Desktop Client startup view

ProClarity Desktop Client supports numerous command-line arguments, which allow you to determine how the application opens and to specify which add-ins are loaded. For example, you can use command-line arguments to designate the provider, server, and cube name, and thereby eliminate the need to click through the default opening dialog boxes.

The command-line arguments also allow you to determine which view (Grid, Chart, Perspective, or Decomposition Tree) is initially selected to present your data. One of the command-line arguments allows you to skip the opening dialog and immediately view data in the Chart view.

For a complete list of the command-line arguments available in ProClarity Desktop Client, see the Online Help.

Developing Visual Basic code from within ProClarity Desktop Client

ProClarity Desktop Client includes an integrated Visual Basic® Editor (under **Tools/Macro**) that allows users who are familiar with Visual Basic to automate tasks, customize the ProClarity Desktop Client interface, and extend the functionality of ProClarity Desktop Client in other applications.

Note

The Visual Basic Editor is not available in the Rich Client.

This section provides a brief overview of the Visual Basic Editor. Subsequent sections in this chapter provide descriptions and examples of how the Editor is used to write macros, create add-ins, and develop plug-ins.

The Visual Basic Editor provides access to the ProClarity Desktop Client object model, which consists of over 150 objects. These objects allow programmatic control over most aspects of the ProClarity Desktop Client application.

The following are brief descriptions of the Visual Basic Editor components used to customize ProClarity Desktop Client:

- **Object Browser**—Lists all available objects in a project as well as their properties, methods and events.
- **Properties Window**—Displays design time properties for selected objects and allows you to change their settings.
- **Project Explorer**—Presents a hierarchical list of projects and displays the **Code** window. This component is used to develop Visual Basic code.

The Visual Basic Editor includes Microsoft Visual Basic Help, an excellent resource for learning Visual Basic. For more information on using the Visual Basic Editor in ProClarity Desktop Client, see the Developer's Guide.

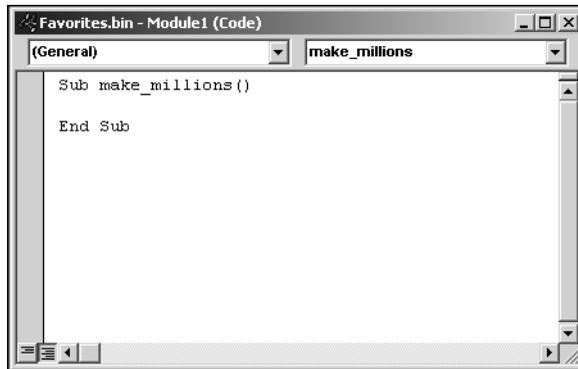
Writing a macro to consolidate a series of tasks

A macro consolidates multiple keystrokes into one, allowing you to complete common tasks more quickly. You can create, edit, or delete macros in ProClarity Desktop Client using the integrated Visual Basic Editor (under **Tools/Macro**).

Following are two examples of how a macro might be used:

- To define specific attributes for data points based on dimensional value. For example, you can write a macro that displays all chart data specific to a certain company in blue.
- To automate tasks such as updating a briefing book page and emailing it to specific individuals or publishing an Active book to an internal web site.

A **Macros** dialog box allows you to run an existing macro or create a new one. To create a macro, enter a name in the **Macros** dialog box. The VB Editor code screen appears, displaying an empty subroutine expression, as shown in the example below:



Developing a macro in the Visual Basic Editor

Macros can be created and stored within a briefing book or in favorites. If stored in a briefing book, they transfer with the briefing book. Macros can be exported to a .bas file and imported into another user's favorites. Macros appear in the **Tools** drop-down menu.

Creating an add-in to customize ProClarity Desktop Client

Add-ins are programs you can write to modify, customize, or extend the functionality of the ProClarity Desktop Client application. These programs are often used to create personalized wizards or other custom macros that run in response to a toolbar or menu option. Unlike macros, add-ins can be distributed.

ProClarity Desktop Client supports two types of add-ins: VBA (Visual Basic for Applications) and COM (Component Object Model). VBA add-ins are created within ProClarity Desktop Client, using the integrated VBA Editor. COM add-ins, also referred to as binary add-ins, can be developed with any language that can create COM components, including Microsoft Visual Basic 6, Microsoft Visual InterDev®, Microsoft Visual C++®, and Borland® Delphi™.

You can create and import VBA add-ins from within ProClarity Desktop Client (under **Tools/Add-in**). Following is the dialog box for creating an add-in. After you have assigned the add-in a name, you develop the necessary code in the Visual Basic Editor.



Creating an add-in

For more information on developing VBA (Visual Basic for Applications) and COM add-ins, see the Developer's Guide.

Developing a plug-in to extend functionality

ProClarity Desktop Client plug-ins are ActiveX® controls that work within the ProClarity Desktop Client environment and extend the functionality of the application. Whereas add-ins supplement existing functionality, plug-ins provide new features. The following are a few examples of how plug-ins are used:

- To integrate a Mapping/GIS tool with a custom selection or layout control
- To create a vertical or specialized data visualization tool for a specific application or industry
- To migrate an existing application or data-visualization control to OLAP

Some plug-ins are standard to the ProClarity Desktop Client interface, while others are created by third-party vendors. Standard ProClarity Desktop Client plug-ins can be used on their own or with other controls to perform tasks such as the following:

- The Page control can be used to limit access to a specific set of dimensions.
- The Chart control and Dimensions tool can be attached to a specific cube to develop a Web-based reporting system for a company's intranet.
- The Page control and the Time Line control can be used with a custom-built cube selector as the OLAP segment of a customer-centered supply chain optimization application.

Third-party plug-ins can be built from scratch or by leveraging an existing control. For detailed instructions about developing and deploying plug-ins, see the Developer's Guide.

Glossary

Action

An Action is a link to a supplementary document about a dimension member. Actions are set up by the cube administrator and can be a Web page, a special report, or any type of related information. Actions are denoted by a green triangle in the Dimensions tool next to a member name, in chart callouts, and in individual grid cells.

Active Books

An Active Book is a single page or complete briefing book that can be viewed within a Web browser. It can be interactive or read-only. An interactive Active Book downloads the components needed to use it. You do not need ProClarity Server to publish or use Active Books.

Ad hoc queries

Ad hoc queries are questions about specific data relationships that are not asked regularly enough to build a standard report to answer. The Ad hoc Query Wizard simplifies and streamlines the process of posing ad hoc queries about business data.

Authoring Tool

See “ProClarity Server Authoring Tool.”

Briefing books

Briefing books are compilations of views (pages) that may be organized into folders. You can save them to your own computer, publish them to ProClarity Server, e-mail them, save them as HTML (an Active Book), and export them to Outlook, PowerPoint, or as a Web Part to be used in a digital dashboard.

Calculated measures

Calculated measures are calculated members defined as measures. See the calculated members definition below.

Calculated members

Calculated members are dimension members whose values are created by summing (or applying some other arithmetic operator to) the values of other selected members. Calculated members can also be defined as measures (calculated measures).

Collapse

Collapse similar to Drill Up. Collapse displays less detail about an item while maintaining the current display of other items.

Command-line arguments

Command-line arguments allow you to specify how the application opens by designating the provider, server, and cube name in a command-line argument, rather than clicking through the default opening dialogs.

Compiled Model

A Compiled Model is a group of files used while executing an English Query. In order to understand a typed-in query, the English Query engine compares the typed-in words to a pre-defined Compiled Model. If you don't already have a Compiled Model, you can use the Compiled Model Builder to create one based on the structure and contents of an existing cube.

Cube

Cube is the term used to describe a database used for multidimensional analysis. Each cube contains a set of measures (quantitative data such as Unit Sales) and dimensions (descriptive data such as Type of Product and Store Location). As you work with ProClarity, queries are sent to the cube to be answered, and the results are returned to ProClarity for display.

Cube cell formatting properties

Cube cell formatting properties are properties (such as background color and font style) that have been set in the database.

Decomposition Tree

Decomposition Tree is an analysis option unique to ProClarity that breaks a measure apart into its subcomponents. The results of the decomposition appear in a hierarchical tree and in an optional pareto chart. By decomposing a measure, you can clearly see the raw and percentage data that comprise each component of a measure. By using the pareto chart, you can focus on the changes you see in the tree to determine how those changes relate to the whole.

Desktop Client

Desktop Client is the ProClarity data analysis application that runs in a desktop computer as an independent application (not in a Web browser).

Dimensions

Dimensions describe attributes (categories) of a measure. For example, dimensions of a Sales Dollars measure might include Geographic Region, Product Family, Sales Representative, and Customer Type. Attributes of a dimension are called members or items.

Dimensions tool

The Dimensions tool allows you to select dimensions and measures and arrange them to explore data relationships. It displays a hierarchical tree of members for each dimension.

Dimension tree

A Dimension tree is a hierarchical arrangement of a dimension's members. Each dimension tab in the Dimensions tool displays a dimension tree.

Drill down

Drill down enables viewing lower levels of a dimension member's hierarchy. Drilling down increases the level of detail that is displayed.

Drill To Detail

Drill To Detail enables viewing of the individual transactions, or records, that contribute to a value.

Drill up

Drill up enables viewing higher levels of a dimension member's hierarchy. Drilling up reduces the level of detail that is displayed.

Eliminate

Eliminate removes selected items from the current display of data.

Exception highlighting

Exception highlighting is a feature used in a grid to highlight numbers that meet specified conditions. For example, you could make all cells containing numbers over 5,000 display as yellow.

Expand

Expand is similar to Drill Down. Expand displays more detail about an item while maintaining the current display of other items.

Filtering criteria

Use a filter to display only the portion of data you wish to view.

None	No filtering. Displays entire result of the query.
Top (Count)	The top number of rows specified.
Bottom (Count)	The bottom number of rows specified.
Top (%)	The rows that comprise the top specified percentage of the column.
Bottom (%)	The rows that comprise the bottom specified percentage of the column.
Top (Sum)	The rows with the largest values that, when summed, comprise at least the value you specify.
Bottom (Sum)	The rows with the smallest values that, when summed, comprise at least the value you specify.

Hierarchy

Hierarchy refers to the arrangement of members in a dimension. Using various data analysis features, you can explore the levels of a dimension's hierarchy. For example, if you drill down on a quarter in the Time dimension, you will see members at a lower level in the hierarchy—the three months in the quarter.

Isolate

Isolate removes all but selected items from the current display of data.

MultiDimensional eXpression (MDX)

MDX is a set of database functions that is used to access data in multidimensional datasets. MDX has the tools necessary to ask complex questions of a database and quickly return information from multidimensional datasets. To access MDX functions, create a Custom Formula Calculated Measure or select MDX Editor from the View menu.

Measures

Measures are quantitative values contained in a cube. Some examples of measures are Sales Dollars, Number of Product Failures, Gross Margin, and Average Inventory Levels. All cubes have at least one measure, and they can

have multiple measures. Measures are analyzed against dimensions (categories). For example, you can analyze the measure Sales Dollars against Geographic Region or Product Family. You can work with existing measures or use the Calculated Measure Wizard to create measures based on formulas containing existing measures.

Members

Members (also referred to as items) compose the detail associated with a dimension. Members of a dimension appear when the dimensional hierarchy is expanded.

Modeling

Modeling (also called writeback) allows you to change data values to create a model for tasks such as forecasting and budgeting.

Multidimensional analysis

Multidimensional analysis is a process of analyzing data that is organized according to the variables (such as Region, Product, Time, and so forth) that decision-makers find most useful in looking at their businesses.

Named sets

Named sets are sets of dimension members that are given a name to be used in queries. For example, if you want an easy way to display the 10 salespersons with the highest sales, you can create a named set containing these salespersons. The set will then be available in the Dimensions tool by name and can be selected like a dimension member.

Nodes

Nodes are the individual “leaves” on a Decomposition Tree. A node represents a dimension member and contains information about the member's relative contribution to a measure (such as Sales).

OLAP (Online Analytical Processing)

OLAP is a way of analyzing data by interacting directly with the data, rather than by viewing static paper reports. OLAP technology arranges raw data so that someone working at a computer can view the data in graphic formats that reflect a wide variety of relationships among the data.

OLE DB for OLAP Provider

It is the term used for the OLAP server software. Microsoft OLE DB Provider for OLAP Services 8.0 is an example of an OLE DB for OLAP Provider.

Organization options

Organization options allow you to organize favorite views and pages within briefing books.

Copy	Copies a single selected page or a selected folder and its contents.
Move	Moves a single selected page or a selected folder and its contents.
Rename	Renames a single selected page or a selected folder and its contents.
Delete	Deletes a single selected page or a selected folder and its contents.
New Folder	Opens a dialog box for creating new folders.

Perspective tool

The Perspective tool is a way for you to analyze and compare the relationship between two sets of measures for a particular dimension. In contrast with most data analysis tools that can work only with limited quantities of data, Perspective enables analysis of large volumes of data. Through Perspective views, you can gain perspective over the thousands of points of data available to you, and you can see the relationships those data points have with each other.

Pivoting

Pivoting the view refers to changing the arrangement of measures and dimensions on rows, in columns, and in the background of data views. Use the Dimensions tool to pivot the view.

ProClarity Server

ProClarity Server (ProClarity Enterprise Server) provides controlled Web access to ProClarity briefing books, allowing users to analyze data without installing software on their computers.

ProClarity Server Authoring Tool

The ProClarity Server Authoring Tool is used to publish books to and retrieve books from ProClarity Server and manage security for the books.

Query

Queries are requests for data about measures and dimensions that you select. The results of your queries are displayed on the screen.

Rich Client

The Rich Client has the look and feel of ProClarity Desktop Client but runs in a Web browser. Rich Client and Desktop Client users can publish to ProClarity Server.

Series

Each series represents a row of data. Series are represented by the bars, areas, pie slices, lines, or points of a chart and by the individual entries on the Rows legend.

Slices

Slices of data change when you change Background member selections. In other words, the Row and Column comparisons are based on different data subsets (“slices”) as defined by the selected Background members.

Web Client

Web Client users access briefing books and associated analysis features through a Web browser, without having to download software to their computers.

Web Part

Web Part is the term used for a collection of files required to display a briefing book in a Microsoft Digital Dashboard Version 2.0. ProClarity creates these files when you use the Export to Web Part feature.

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